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THE EDUCATION OF THE DEAF CHILD.*

MAX A. GOLDSTEIN, M.D., F.A.C.S.,

ST. LOUIS.

In New Orleans, as in every large municipality, there is an awakening interest in the problems of the handicapped child and the more satisfactory measures to be employed by the larger community in coping with these handicaps.

The question that confronts us tonight is the intelligent disposal of the Deaf and Defectives in speech in this community.

To my colleagues in Oto-laryngology in New Orleans, I want to emphasize the fact that we in the medical profession and not this special field, owe responsibilities to the community which are as important as the medical and surgical efficiency which we offer as our handicraft. The doctor must share with the teacher, with the parent, and with every organization and individual in a community, the trust imposed upon him in the care, education and proper disposal of the deaf child and the child handicapped by defects in speech, as well as in the normal child. If we in the medical profession have not as yet equipped ourselves to render such service to the congenitally deaf child, it does not relieve us of our responsibilities to him. Oto-laryngology must include in its field a better understanding of all of the conditions that apply to the deaf child, including an analysis of the types of deafness, degrees of deafness, his peculiar psychology, additional methods and possibilities, and the end results that can be expected of modern pedagogic methods. In the evolution of methods of education, the teacher of the deaf has also participated, and the exploitation of the sign-language is becoming more obsolete year by year as a better understanding and more efficient application of speech-training is developed.

Another phase of the question which the Oto-laryngologist must not overlook is legislative measures for the benefit of the deaf child in the municipality and in the state.

Committees on education in the state legislatures must familiarize themselves with the care and the best form of training for the deaf so that they may intelligently enact the necessary measures for this large and growing class of the handicapped. The Oto-laryngologist must contribute his quota and his influence toward a better understanding of these problems. In some states there is more effective legislation and larger appropriation for the care of sick cattle and for the disposal of hog-cholera than for the intelligent disposal of the deaf child.

The program that is now carried out by the public school system of every large city is to establish special classes for the teaching of deaf children in conjunction with one of the public schools or assign an entire school in the system where the deaf child may be taught by modern pedagogic methods. Such modern pedagogy consists in teaching the child fluent, flexible, audible speech and making his further contact with the normal community possible by efficient lip-reading. We advocate beginning the deaf child's instruction at an early age when the speech mechanism is still pliable and plastic

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and when the active little brain is in its most receptive state for the acquisition of oral speech.

New Orleans has already made an auspicious beginning in this work and a class for the speech teaching of deaf children by oral methods is already in operation under the administration of the public school system.

The Permanent Committee on the Deaf Child of the American Medical Association, of which I am the secretary, presented a resolution at the anuual meeting of the A. M. A. in St. Louis two years ago, as follows:

"Resolved, That we recommend exclusively oral instruction of deaf children and that the oral teaching of the congenitally deaf child and the acquired deaf child be made a part of a department of the public school system in all larger cities."

With one or two exceptions, this resolution has been carried out in every large city where day-schools for the deaf in conjunction with the public school system have been established.

To give you a practical demonstration of what is being done in the oral training of the deaf child, I have asked a group of deaf children now being instructed in New Orleans together with their teacher to give you a few exercises in speech and lip-reading. These children have been selected at random and at short notice and no effort at a systematic demonstration has been made, but for those unfamiliar with this form of training there will be much food for thought and I hope some stimulation to participate in these activities in the future. To efficiently train a totally deaf child by speech methods that will result in intelligent, fluent speech, we need specially trained teachers. There are but few training schools in the land where such teachers can qualify. There is a scarcity of good teachers because it requires an unusual combination of characteristics to make a successful teacher of the deaf. She must have a world of patience; a sympathetic understanding of the handicap which the deaf child faces; a comprehension of his peculiar psychology; a knowledge of the principles and the anatomy and physiology of the hearing and speech organs and experience in the class room with practical pedagogy under the supervision of qualified seasoned instructors.

The teacher of the deaf is woefully underpaid and that is one reason why intelligent men and women who could apply themselves to this noble cause, seek other avenues for their brains and energies.

Another constructive criticism which I desire to submit is that the teacher of the deaf to produce successful speech results with her pupils, should not have inflicted on her an ungraded class of from 12 to 15 pupils as is the case in New Orleans today; she should be required to concentrate her energies on a graded class of not more than 6 or 8 pupils per teacher. So much of the instruction imparted to the deaf child becomes an individual equation, and only by limiting the class to a small working field can the best results in speech be obtained.

Active co-operation must be developed in every community and in every school for the deaf between the teacher in charge of these groups of children and the Oto-laryngologist. Your local Ear, Nose and Throat Society should select one or two of its members who are kindly disposed to assist in the development of this problem; these men should visit the classroom at least once a week for an hour or two, become more intimately acquainted with the teaching methods of the deaf child in the classroom, and confer with the teacher on the problems that arise in the pedagogy and scientific conduct of these pupils. Only by such co-operation will improvements in the methods of instruction be made and the utilitarian value in the training of the deaf child be increased.

The medicine of the state will not be the highest attainments of surgical technique and profound therapeutics, but all intelligently applied measures for the prevention of disease. Here again the Oto-laryngologist must perform his duty more effectively. The community must be taught through this branch of the medical profession about the causes of deafness, the tendencies of hereditary transmission, the effects of diseases such as tuberculosis, syphilis,

rickets, scarlet fever, measles, etc.; the disposal of mechanical defects and obstructions such as adenoids, hypertrophied tonsils, obstructing turbinates and septum. There is an almost limited field of activity for the Oto-laryngologist; he can be of inestimable service, not only by his surgical training, but because of his knowledge of the pathology of the ear, and his training as an advisor to the family in which such handicaps are presented for consideration.

The force of public opinion sways the machinery by which the community is developed. You members of the special medical profession are an important factor in shaping public opinion and must assume this responsibility in the future more effectively than in the past. Education is the keystone to the greater development of a nation and it is the vital underlying principle in the development of every movement for progress. This education is as necessary to an understanding of the deaf child as it is to the normal child. Educate the community, therefore, in those phases of the problem with which you are qualified to assert your authority because of your training and of your experience; help educate the educators and the legislators. Incidentally, study the deaf child more closely and get additional education yourselves.

Not only is the congenitally deaf child a subject for your serious consideration but the school child who acquires deafness of a rather profound degree is seriously handicapped in his further instruction. A child of 10 or 12 years of age who develops scarlet-fever or measles and has his drum membranes or ossicles gradually sloughed away by chronic suppuration or whose auditory nerve is seriously affected as the result of poliomyelitis, meningitis or typhoid fever, is no longer in a condition to be placed in the normal school room under normal environment. When the hearing is very materially depreciated in this large group of children, he should be taught efficient lip-reading so that he may go back into the normal school room and again take his place with normal fellow-pupils. This child of course, has a tremendous asset which the congenitally deaf child only acquires mechanically, that is, fluent oral speech.

Another type is the hard-of-hearing child who can still hear conversational voice at a distance of less than 10 ft. These children should be placed in smaller groups than are found in the normal school room where more individual attention may be given by the teacher. Instead of receiving reprimands by teacher and parents for what is presumed to be inattention to his studies, this child should be considerately cared for and the handicap of his defective hearing constantly borne in mind.

Not only the deaf child but also the deaf adult claims a share of our consideration. If a survey were made of adults who have become deafened as a result of disease or injury,—deafened to such a degree that otological skill may no longer offer promise of improvement or arrest of the defective hearing, the sum total of such a survey throughout the land would go into the hundred-thousandths. Otologists are today in a position in a large percentage of such cases to make a differential diagnosis of the types of deafness and to offer honest advice as to whether further treatment should be undertaken. I hold that if a diagnosis of clinical otosclerosis can be made by functional hearing tests together with a history of the case that the most honest advice that an otologist can offer such a patient is to discontinue further treatment and take up lip-reading.

Lip-reading or speech reading is not a convenient thing for the otologist to shift his professional responsibility on, but a real asset to the deafened. If lip-reading is systematically and earnestly studied and the instruction given by a competent teacher, the average deafened person who so applies himself, may in the course of from 4 to 6 months become an efficient lip-reader and thereby develop a splendid asset and substitute for his defective hearing or even complete deafness.

I cannot conclude these considerations of the handicapped without mention of another large group of children who until comparatively recently have received no dignified pedagogic and scientific study of recognition, namely, the child handicapped by one of the several defects in speech such as stammering,

stuttering, lisping, baby-talk, lolling and other cognate speech defects. If the law of average holds good in every large community, about 10% of the entire number of school children in every large community are afflicted with some form of defective speech, varying from a slight impediment to a serious handicap. By far the largest proportion of these speech defects are amenable to correction by special pedagogic and speech exercises and the adoption of efficient, corrective measures by specially trained teachers and specially selected centers to which such children should be sent for this training is a matter to be seriously considered by every large metropolitan city, especially in its public school system.

The demonstration of the group of children to illustrate some of the feature which I have emphasized in presenting this matter for your consideration, tells its own human interest story. Many of you have never before realized that a congenitally deaf child could be taught to speak and to speak fluently, distinctly and with good voice inflection.

You have called these children "Deaf and Dumb." Dumbness, as a pathological entity is very rare. A congenitally deaf child uncared for and untrained by special pedagogy, is dumb because speech is but an imitation of sounds heard by our human fellows and a child born deaf cannot imitate spoken language because he cannot hear it. To the totally deaf child, speech must be taught mechanically by properly trained teachers and this mechanical speech can be developed to such a degree of smoothness and naturalness as in many instances not to be distinguished from normal speech by the untrained ear.

In conclusion, I appeal to the splendid municipality of New Orleans and to the State of Louisiana more consideration on the part of parents, teachers, social service workers, the medical profession, Boards of Education, and Legislators, for a greater degree of consideration, more substantial appropriations, the selection of an adequate staff of trained teachers for the education and development of the Deaf child and his handicapped neighbor, the child with defective speech.

INCORRECT DIAGNOSIS OF RIGHT ILIAC SURGICAL CONDITIONS; REPORT OF CASES AND GENERAL REMARKS.*

A. C. KING, M.D., F.A.C.S.,

NEW ORLEANS.

The diagnosis of appendicitis and other surgical conditions of the right iliac region is easy,—sometimes. The difficulties confronting us are many and varied, and it is not surprising that errors are frequent, especially since many competent physicians persist in making rapid fire diagnoses. I mean diagnoses from some of the clinical symptoms, omitting perhaps the most important.

Certainly each case should receive the most careful consideration, no matter how easy and simple and clear cut the diagnosis appears. In addition to the routine abdominal examination by palpation, the blood count, urinalysis, etc., every case, where possible, is entitled to a carefully made gastro-intestinal and genito-urinary x-ray examination. We owe such a careful going over to both the patient and to ourselves.

In spite of all this, however, we are going right along making mistake after mistake, some of them excusable, and others not. The difficulties of making correct diagnoses in all cases are numerous, as some of those reported in this paper will show.

We may be fortunate in diagnosing case after case by the mere process of laying on of hands, but if we persist in this superficial method, we will err sooner or later. Often we even omit the hand method and are guided by the pulse and temperature alone. Listen to Sir D'Arcy Power. He says, "Many have died because the surgeon has trusted the pulse and temperature, when he ought to have examined the abdomen." Eventually we slip.

In reference to chronic appendicitis, there are two groups of symptoms, Iliac and Gastric. We pass over the iliac for the present. The gastric symptoms are those of "chronic dyspepsia", gas in the stomach, loss of appetite, coated tongue and nausea; or again, symptoms of peptic ulcer, acid eructations, gnaw-

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ing sensations in the epigastrium and "hunger pains", relieved by eating.

Moynihan has aptly said, "There is now no longer any doubt in my own mind that the commonest site of gastric ulcer is in the right iliac fossa. That is to say, in the majority of cases, where the symptoms would justify or compel a diagnosis of ulcer, the patient is suffering from a lesion elsewhere, and more often than not, from a lesion in the appendix."

So much from this renowned authority. Some of us can recall cases of vomiting of blood which, at operation, revealed nothing further than a chronic or subacute appendix.

If we accept the five signs of appendicitis as emphasized by Murphy, namely pain, nausea and vomiting, local sensitiveness, leukocytosis, and temperature, then add a sixth, Meltzer's leg-raising test, we have a combination by which one should invariably arrive at a correct conclusion, yet by disregarding one or more of these symptoms, and omitting the gastro-intestinal and genito-urinary examinations, not a day passes that some one of us is not guilty of committing a diagnostic error.

Meltzer's sign is a most valuable confirmatory sign, especially useful in chronic appendicitis, and fails only where the appendix is either high up, near the kidney or gall bladder, or below the pelvic brim. Under these conditions, other symptoms also fail, as witness the many gall bladder incisions through which nothing but a chronic appendix is removed, or a mid-line incision below the umbilicus, through which and appendix is found behind the right broad ligament or in Douglas' pouch. No doubt many of the old time pelvic abscesses were of appendiceal origin.

Now let us dissect these symptoms, and try to ascertain why we err; then let's shake them together again, and compliment ourselves that we are not mistaken even more frequently.

Case I. Young white female, ill three days. Temperature 102, pulse elevated, marked rigidity, and pain in right iliac region. No blood count, no microscopic examination of urine. Diagnosis by the attending physician and myself, as consultant, acute appendicitis. After reaching the hospital, a second consultant was called in as a matter of safety, who not only agreed to the diagnosis, but added, "You have not only an acute appendix, but a ruptured appendix, with a belly full of pus".

Immediate operation. A perfectly normal appendix brought out of the incision, and removed. A perfectly clean and normal peritoneum throughout, and not a drop of pus in sight. Further search revealed no pathology. Temperature ran on for three weeks, varying from 101 to 104. Patient comfortable. Several negative Widal and malarial reports. No urine examination for pyelitis, as at that time pyelitis with us was not a recognized pathological condition. I believe now that this was a simple case of pyelitis, which recovered under rest in bed, proper diet, free fluids, and appendectomy.

Thinking over this and other cases diagnosed as typhoid fever, and running a prolonged course, I feel sure that in years gone by, hundreds, or even thousands, of typhoid fever cases were not typhoid at all but pyelitis. Please note that typhoid is infrequent at the present day as compared with the number of cases twenty and twenty-five years ago.

Case II. Colored female. Age nineteen. Right-sided pain upon pressure and some nausea if pressure was continued. No temperature. No leukocytosis. Pelvic examination, casually made, negative. Diagnosis, chronic appendicitis. Right rectus incision with a normal appendix presenting itself for removal, which was done. Further search revealed the right ovary lying at McBurney's point and attached to the parietal peritoneum by a band one inch wide. This was severed and the ovary replaced in the pelvis. Thus this case of chronic appendicitis was cured. A careless diagnosis was certainly made in this case, by the writer.

Case III. White female. Age thirty. Pregnant for the fourth time. Right-sided pain at intervals for three years, always more pronounced during pregnancy. No nausea or vomiting; no blood count made at any time. "Laying on of the hands" diagnosis, made on account of pain at McBurney's point, and the presence of a small mass. Operation advised previously but deferred. During her fourth pregnancy, the symptoms becoming more marked, operation was urged, and on account of pregnancy, a consultation requested and granted. One of the most acute observers in this City was called in, made an examination, and said, "Yes, I fully concur in the diagnosis of chronic appendicitis, and I can feel the tumor easily. I think you will find at operation a fold of omentum wrapped around the appendix". Operation the following day. Right rectus incision. A perfectly normal appendix was brought up and removed, and a further search made. The mass previously felt proved to be a cystic condition of the fimbriated extremity of the right fallopian tube, misplaced and held in this position by adhesions. The tube was carefully removed. The patient was thusly cured of non-existent chronic appendicitis, and aborted a dead foetus some three weeks later.

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Case IV. Colored female. Age thirty-two. Admitted to the hospital rather acutely ill and with all the symptons referable to the gall bladder. Diagnosed by the admit-

ting officer as acute cholecystitis. Symptoms, pain of an acute character in this region, temperture, slight nausea, increased pulse rate, exquisite pressure pain, Murphy's percussion test absolutely positive for gall bladder pathology. No particular pain over McBurney's point. Meltzer's sign absent. No gastro intestinal or genito-urinary series made on account of the acuteness of the condition. Operation three days later. Incision over gall bladder sufficiently large to explore throughly. Gall bladder perfectly normal; duodenum and stomach normal; no adhesions or evidences of an acute trouble anywhere in the upper abdomen. The appendix was now brought into view and found acutely inflamed, and removed. In pulling up the caecum and colon through the incision, it is not always possible to definitely locate the appendix, and in this case, it may have been retro-caecal and high up,

Case V. Colored female. Age thirty-nine. Transferred from Medical Ward in Charity Hospital to our service. This case had been beautifully worked up and a diagnosis of appendiceal abscess made. Temperature, leukocyte count 22,000, a tender mass in right iliac fossa, size of an orange. Right rectus incision made and a dark mass exposed, with the appendiceal tip adherent. Appendix removed and attention directed to the mass, which proved to be a right-tubal pregnancy, foetus dead, and macerated mass adherent to small bowel and appendix. Removed. This case had been seen and examined by not less than half a dozen men and all concurred in the diagnosis.

Case VI. Colored female admitted at eleven P. M. to our service. Patient in extremis, thready pulse, profuse perspiration, vomiting, abdomen exquisitely painful throughout. Was seen by a house officer three times during the night, who in the face of the general condition did not operate. Was seen by myself at nine a. m. next day. Condition about the same except the vomiting, which had ceased. Patient looked as if no matter what was done or not done, death was inevitable. Seen by Dr. Martin at three P. M., who gave expression to the same opinion. Under Fowler's position, hypodermoclysis, proctoclysis, etc., at the end of three days, patient began to improve. Abdomen still painful in right iliac fossa; pulse still running around 120, but better volume. No vaginal examination made at this time, on account of extreme condition. At the end of three weeks, patient's condition considered fair enough to risk operating. At this time, a mass the size of an orange could be felt in right side of pelvis, bulging upward almost to McBurney's point. Midline incision. A mass of clots found filling Douglas' pouch and fibrinous masses attached to surrounding structures A large black mass filled the right side of pelvic cavity, extending upward. Tubal pregnancy diagnosed, and the mass removed. No blood or clots elsewhere than in the pelvis. Why the intense upper abdominal symptoms? Why the generalized pain finally sifting down to the right iliac fossa and right pelvic region? Several diagnoses were made, ranging from perforated gastric or duodenal ulcer to a pin-hole perforation of the appendix, with leakage and general peritonitis. Not until the mass could be felt was a ruptured tubal pregnancy suspected.

Case VII. White female. Age fourteen. History of a sudden fall two months previous while dancing. Acute pain in lower abdomen for a few days but not disabling. Several minor attacks of similar pain since, considered by her physician as of no consequence. When seen by myself, pain was quite marked in right iliac region, but patient persistently placed her finger lower than McBurney's point. Temperature 101 2-5. Pulse corres ponding. Slight nausea. Consultation with Dr. Martin held, and operation advised. Right rectus incision, through which a healthy appendix was delivered, but judging by an inflamed tip, it had apparently been torn loose from attachment to some organ. After its removal, further search was made and a gangrenous ovarian cyst, size of a large orange, twisted on its pedicle, was delivered and easily removed. In this case, my attention was arrested by the persistency with which the patient placed a finger lower than the normal location of the appendix, insisting that was the spot giving most pain. This lesson has been of value.

Case VIII. White woman. Age fifty-one. Mother of six children. Patient rather nervous and possesses a vivid imagination. Has complained of pain in right side for about eighteen months, indefinite in character. Treated by myself one year ago and relieved. Later attended by another physician and relieved. Again by a third, with no relief. Being called in July 23rd, I determined to come to some conclusion, if posible, so had gastric-intestinal and genito-urinary, complete urinalysis, and blood examinations made, and in addition, the last half a dozen defective teeth extracted. All examinations negative and so reported. Appendix not visualized. Please note that. Patient continued to complain of pain, which she insisted confined itself to the right lumbar region. Pressure elicited no pain, or soreness there, but by long and firm pressure over the appendix, elicited slight discomfort. In the face of negative X-ray findings as to stone, a diagnosis of chronic appendicitis was made, and later through a midline incision, a hard fibrous occluded appendix was removed, no other pathology being found. Patient is now well and her imagination at peace.

Case IX. This is the prize case. Colored female eleven years old, admitted to our hospital service with a diagnosis of ruptured appendix and general peritonitis, by one of the house officers. Seen by myself the following morning. Patient's expression gave no evidence of a profound abdominal condition. Abdomen almost flat and negative as to pain, except over pelvis. Blood count 27,500. As I approached the bed, noticed the patient was on the bed-pan, and when asked the reason, she replied that she had had a diarrhoea for several days. Examination revealed no tenderness over the appendix, but a large mass almost filling the pelvic cavity, easily felt. Turning to the intern, I remarked that this patient had either a dermoid cyst or fecal im-

paction. Upon rectal examination, impaction to a marked degree was discovered. Ether was administered and about a quart of fecal matter removed, followed by a thorough colonic flush. Twenty-four hours later, blood count down to 17,000, following day 9,000, and normal one day later. Another cure for appendicitis.

Case X. Visiting the Michael Reese Hospital some years ago, saw Daniel Eisendroth operating a case of acute appendicitis in a child of two and a half years. Right rectus incision exposed a perfectly normal appendix, while near the lower border of the liver a necrotic looking area about the size of a silver dollar was found and excised. It would have been interesting to know the final diagnosis.

Case XI. Large tumor was filling right side from liver to pelvic brim, and diagnosed appendiceal abscess. Apparently no blood count was made, but of more importance, a urethral catheterization was done, and a hydronephrosis cleared up.

Case XII. Colored girl. Age fourteen, admitted to our service, with diagnosis of ruptured appendix and general peritonitis. Temperature 103, pulse 124. Apparently very ill. Immediate operation. An acutely inflamed appendix removed. No other pathology found. No blood count made at this time on account of haste in operating. During the operation I remarked to the intern assisting that we must find some other cause for the high temperature; that it certainly was not due to the appendix entirely. Advised looking for plasmodia. Temperature the following day up as high 103. Blood negative for malaria. On third day temperature still high. Patient very restless and irritable. Abdomen not sensitive or distended. At nine p. m. that night, plasmodia were found, and under vigorous quinine treatment, temperature was normal in forty-eight hours.

Nuzum, in studying one thousand cases of tabes in the Cook County Hospital, Chicago, found ninety-seven operations performed unnecessarily, eighteen of which were for an appendicitis which did not exist.

We certainly should not skimp our examinations. They ought to be as complete as it is possible to make them, and the case studied from all angles, yet such cases as No. 5 baffle us, while for case No. 9 no excuse can be offered save carelessness.

Conclusions—we are likely to continue making mistakes.

DISCUSSION.

Dr. Hermann Gessner: I want to congratulate Dr. King on having missed making one of the classical errors in operating for appendicitis—operating when the true condition is pneumonia. This has occurred in a number of cases. I had occasion to do that once under peculiar circumstances.

This patient came into Charity Hospital very ill and presenting a rigid abdomen. A thorough examination was made and a pneumonia recognized. In spite of the fact that he had pneumonia, his abdominal symptoms were so marked that I opened the abdomen under local anesthesia. A normal appendix was found and removed. The patient subsequently died; autopsy showed pneumonia, with no complication. It was a case of right pneumonia, with a pleuritis which no doubt extended through the diaphragm to the peritoneum, thus causing abdominal rigidity. Fortunately the operation, as it was done under local anesthesia, to the exclusion of ether did not aggravate his pneumonia.

Dr. Urban Maes: Dr. King has opened a very important topic for discussion. Acute appendicitis is a fairly definite condition to most of us and the percentage of error in the diagnosis of this condition is small, in fact the cases overlooked are so few they are excusable.

The subject on which I wish to speak is the diagnosis of chronic appendicitis. In the absence of the history of an acute attack chronic appendicitis is a most difficult disease to recognize. The acute case has four or five cardinal signs which are present in most instances, which when taken together usually are pathognomonic especially when a few other causes of pathology in the right iliac fossa are eliminated. I do not know any group of symptoms that make the recognition of chronic appendicitis easy and I do know of three patients operated on for this condition, and a stone was found in the ureter. Very recently Dr. Marshall Clinton of Buffalo has called my attention to a condition worthy of mention, especially where pain in the right side is a predominating symptom. This is a neuritis of the 12th intercostal nerve. In one patient, appendix and gall-bladder were removed and a floating kidney was anchored, but the pain persisted and was found to be a neuritis of the 12th intercostal nerve. This pathological entity is found in people with a long 12th rib or in short-waisted people where the 12th rib touches the crest of the ilium in certain positions thus setting up a traumatic neuritis.

In looking over my statistics of end results in chronic appendicitis, I find that about 30 per cent of my patients return with gall-bladder disease. Both chronic appendicitis and chronic cholicystitis cause the same type of reflex dyspepsia. This and the 12th rib condition should be remembered in our patients on whom we suspect chronic appendicitis.

Dr. A. C. King (closing): I wish to thank Dr. Gessner for congratulating me for not operating cases of pneumonia having or supposed to have acute appedicitis. Perhaps I failed to diagnose the pneumonic condition.

I stated in my paper that Nuzum has reported 9 1-2 per cent of 1.000 cases of syphilitic infections of various kinds operated unnecessarily. I have often wondered many times if we have not operated on a syphilitic right iliac pain and called it chronic appendicitis.

Dr. Martin referred to leg pains in chronic appendicitis. I have also observed this and

especially in women. Flexing the thigh gives relief in most cases.

Meltzer's sign is simply a confirmatory sign and is valuable. The appendix normally lies on the ilio-paoas muscle, and in this test or sign pressure over the appendix while the leg is being elevated by the patient, held perfectly stiff while lifting it, gives pain. The appendix is simply squeezed between the tense muscle and fingers.

SYPHILIS AND PREGNANCY.*

BY DR. E. L. KING, M.D., F.A.C.S.,

Assistant Professor of Obstetrics, School of Medicine, Tulane University of Louisiana.

To Osler, I think, is ascribed the remark that to know syphilis is to know medicine, and while I do not pretend to know either, I feel that it is well occasionally to consider this widespread disease in its relation to the various specialties. We are all liable to encounter it in our work, and if it is recognized early and treated properly, the results are often surprisingly gratifying. However, some syphilographers and a fair number of neurologists are rather pessimistic as regards a permanent cure, unless the disease is treated much more energetically and for a much longer period of time than is generally done.

Women may be infected with syphilis before becoming pregnant, at the time of conception, or at any time during pregnancy. Many luetic women are sterile, however (DeLee), but if one should become pregnant, the child is always luetic, and generally dies prematurely and is expelled from the uterus. If untreated, the patient as a rule carries each fetus nearer to term than the preceding one, until finally a living but sypilitic child is born. If syphilis is contracted at the time of conception, the child is always luetic (Williams), the the outcome is practically the same. In such a case, DeLee states that "early abortion is the rule," though Williams says that "on the other hand it [i. e., syphilis] plays but a small part in the causation of early abortion." Probably both are right; there are so many etiological factors responsible for abortions that syphilis may be to blame for only a small number of the total, even though we admit that most cases of simultaneous syphilis and pregnancy end in this manner. If the mother is infected during early pregnancy, the child is usually luetic, but if she becomes syphiltitic in the later months, the child may escape. Le Pileur (quoted by Williams) found that in 139 women who had become syphilitic after having borne children, the fetal mortality was 78 per cent after developing this infection, as contrasted with 3.8 per cent before this event.

It is generally agreed that recent syphilis has a more disastrous effect on a pregnant woman than on one not pregnant. The chancre is larger than usual, and is more rebellious to treatment. Vulvar lesions, such as condylomata and ulcerations, are frequently found in florid cases, and are hard to cure. The general symptoms are often exaggerated, and ill-defined pains, neuralgias, etc., should arouse our suspicion. On the other hand, we encounter much more frequently what we may call latent syphilis. The patient gives no history of an initial lesion, has no visible manifestations of lues, but often gives a history of spontaneous premature delivery of one or more macerated infants. In such a case a positive Wasserman reaction is practically always obtained. The fact that the history is often negative regarding the initial lesion may mean that chancre of the cervix is much more common than is generally thought, but is symptomless and hence is not diagnosed. In many of these women, especially in those of the clinic type (and more especially in negroes), no clear history of secondaries can be obtained. These patients do not complain and appear to be in excellent health; nevertheless, they will probably lose their babies unless properly treated.

The effects of syphilis on the fetus, as noted above, is disastrous if there is no treatment or if the treatment is inadequate. Lespinasse quotes Marcus as stating that 90.2 per cent of children born of untreated mothers are luetic. Fournier, in 45 untreated cases, reported 37, or 82 per cent, fetal deaths (29 still-births or miscarriages, while 8 died soon after birth); of the eight living children, six had syphilis. Leredde states that when the treatment is inadequate the fetal mortality may be as high as 64 per cent. Williams states that of 705 fetal deaths in 10,000 deliveries at the Johns Hopkins Hospital, syphilis

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was the responsible factor in 26.4 per cent. Besides these, many others that were born alive died in a few days, and still others lived, but developed signs of hereditary lues later. Of these 705 deaths, 334 fetuses were delivered prematurely, and syphilis was responsible in 40 per cent of these cases. Similar figures can be obtained from the reports of many other observers, but these quoted above are sufficient to impress us with the gravity of this complication.

Naturally, early diagnosis is of paramount importance. In the active cases, in which pregnancy and infection are coincident, or in which infection occurs after pregnancy, this is usually easy, especially if vulvar lesions are present. In many cases, however, which we may call latent, the history of spontaneous stillbirths in multiparae may be the sole warning. Here the Wasserman reaction is almost invariably positive. In primiparae, the positive Wasserman may be the first intimation of trouble. Of course, the question of the reliability of the Wasserman test is involved. Lespinasse gives the following figures, based on series of cases of undoubted and proved syphilis: primary stage, 73.5 per cent positive (Vedder), 92.3 per cent positive (Noguchi); secondary stage, Vedder, 91.9 per cent positive, Noguchi, 96 per cent, Craig 96.1 per cent, Swift, 92 per cent; tertiary stage, Vedder, 86.3 per cent, Noguchi, 89.8 per cent, Craig, 87.4 per cent, Swift, 80 per cent; latent stage, Vedder, 80.7 per cent, Noguchi, 77.7 per cent, Craig, 68.1 per cent, Swift, 64 per cent. So that the usual acceptance of the Wasserman reaction as 90 to 95 per cent accurate is approximately correct, especially when the reaction is strongly positive. In pregnancy, however, there is an unexplained variation, as occasionally, according to Williams, a woman with a positive reaction before delivery will later, after delivery, be found to respond negatively, in spite of the fact that no treatment was administered. DeLee has made the same observation, and feels that the Wasserman reaction in pregnancy needs more study. In the present state of our knowledge, however, it is certainly better to consider a pregnant woman with a strongly positive reaction as luetic and treat her accordingly. The results of this test have called into question the validity of Colle's law, that a healthy woman may have a luetic child by a syphilic husband, as in practically all such cases the maternal reaction is positive. Profeta's law, that a luetic woman may give birth to a healthy child which is immune to syphilis, is also negatived. Williams, however, is not quite prepared to give up Colle's law, and cites the following case in support of this position. A colored woman, who had been delivered several times of healthy children at the Johns Hopkins Hospital, was delivered of twins, one healthy and one definitely luetic. On being questioned, she admitted intercourse within a few hours with two different men, her husband and another; the latter was under treatment at the Hopkins clinic at the time for syphilis. The patient had a negative Wasserman reaction, and subsequently gave birth to several more healthy children.

After delivery, the diagnosis of fetal syphilis is best made by autopsy on the still-born fetus, and lues should be diagnosed only if the treponema is found in the organs. If the baby lives, clinical observation by a pediatrician is advisable. The Wasserman reaction on blood obtained from the cord at delivery is stated by Williams to be so unreliable as not to be worth the trouble, and we have had the same experience in a series of several score cases studied at the Charity Hospital. Williams, Slemons, and others lay great stress on the microscopic study of the placenta, claiming that there is a characteristic clubbing and thickening of the villi, which are almost devoid of blood-vessels and are packed with round or oval cells. Williams, in particular, emphasizes these findings as diagnostic of lues, but states that negative findings do not rule out lues in the child. In an attempt to confirm these findings, several hundred placentae were examined in the pathological department of the Charity Hospital a couple of years ago, but the pathologists could not satisfy themselves that there were any characteristic changes, and the results were so unsatisfactory that the study was discontinued.

Once diagnosed, the indication is clear, and the patient should be treated as vigorously as if she were not pregnant. Some claim that arsenic in the

last month of pregnancy is particularly liable to cause premature labor, more so than at any other time. This, however, is by no means universally admitted. As in all other cases, best results are obtained by the use of arsphenamin and mercury. DeLee is averse to the use of arsenicals when the diagnosis is based solely on a positive test, preferring mercury and tonics in such cases. Davis states that in using arsenicals there is a distinct danger to the fetus, but that the risk is justifiable, as the fetal mortality from lues is so high. It appears, from the literature, that even incomplete treatment will save the baby; three or four months of treatment nearly always assures an apparently healthy, vigorous child. One of our patients, who had delivered a macerated fetus in June, 1922 (at which time her Wasserman test was strongly positive), returned to the clinic in August, 1923, received six doses of neo-arsphenamin and a couple of mercurial rubs, and was delivered of a vigorous full-time baby in November. Thorough treatment will give most excellent results, as far as the fetus is concerned. As an example, I may refer to another patient, colored, who had lost nine babies from lues. Treatment from early pregnancy resulted in a healthy baby, and two others have been born since. Two years ago, the mother and the first child were found to have weakly positive reactions, and so they were given treatment in the special clinic, with a prompt return to the negative state. In our work so far, we have not seen any ill-effects from arsenicals, but we must bear in mind the frequency of toxemias and of renal complications in pregnancy, as, of course, arsenic would be contraindicated if such a complication were present.

In checking over the 1923 records of the Charity Hospital, I found that of 326 Wasserman reactions on white pregnant women, 318 were negative and 8 were positive, a frequency of 2.4 per cent. Three hundred forty-nine colored women were tested, with 59 positive results, or 16.9 per cent. These figures correspond very closely with those of Williams, who gives 2.5 per cent and 16.3 per cent, respectively. In another ward, where the complications of pregnancy and of puerperium are treated, there were 6 positive reports in 177 tests, or 3.4 per cent. In investigating these 73 cases showing positive results, our findings were as follows: in 52 of the colored patients there were 19 stillbirths (10 macerated), one abortion, three premature dead babies, six premature living babies, another premature baby which died twelve hours after birth (the mother was eclampic), and 22 babies at or near full term were born alive and left the hospital with their mothers. Thus there were 28 living babies in 52 colored cases, showing a fetal mortality of 46 per cent. Of six white patients, one delivered a stillborn baby of four pounds, one a stillborn baby at term, one delivered prematurely at six months ,one aborted at three months, and only two delivered full time, living children. Of the fifteen other patients, some left the hospital undelivered, and the records of the others were not available.

Hence it behooves us to watch for spyhilis in our pregnant women, especially in our colored clinics. In our work in the Charity Hospital out-patient department, we have our patients routinely tested, and feel that we are accomplishing some good thereby. In private work, a routine Wasserman test is not so essential, but every patient with a suspicious history or a record of a spontaneous, unexplained stillbirth should be carefully studied. In obstetrics, as in all other fields, eternal vigilance is essential in order to obtain good results.

I desire to thank Dr. J. E. Kanatser, intern at Charity Hospital, for his valued assistance in looking up and tabulating the records of the institution.

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DISCUSSION.

Dr. J. S. Hebert: Of course the subject is one that would fill a lage book and Dr.

King certainly cannot do justice to the subject and specialty in such a short space of time.

From a practical standpoint, the most surprising and interesting feature about this subject is one that faces all of us who do obstetrics. We have heard the statements made by Dr. Landford and the nature of his discussion did not touch upon it. Here is an apparently healthy husband and wife; in due course of time an apparently healthy baby is born. In about one to three weeks to our great surprise we have a newborn baby with typical general syphilis. The situation is a very embarrassing one to explain to the father and mother and the question arises as to how shall we meet this problem. Generally the accoucher (at least I do not) does not or possibly feels that he should not make a diagnosis. We call in a specialist and the diagnosis is then made.

The mysterious question then arises: who does it come from? We take the blood from the father and get a negative report. We take repeated cultures and examinations and all come back negative. There is a possibility it is from the mother. We take cultures and Wassermans; all examinations are made, and all come back negative. Where does it come from? I would like Dr. King to enlighten me on the subject.

Dr. E. L. King (closing): The question of syphilis as a cause of abortions has been considered in our work. The general consensus of opinion is that syphilis does not usually cause abortion in the early months—they generally carry to the later months and lose the child in the last two or three months of pregnancy.

I have a patient, 19 years old, brought into Charity Hospital yesterday. She has had six spontaneous abortions. I hardly think she has syphilis.

I know of one lady who has had six or seven miscarriages. She was anxious to have children and would even go to bed for weeks and still she would lose her baby. In this particular case, the patient and her husband were thoroughly examined; there was no history of syphilis; Wasserman negative on both and nothing else to be found. Everything in the way of necessary surgery was done, to no avail. So we cannot explain these cases on the grounds of syphilis. Chronic endometritis may sometimes be responsible.

There has been some interesting work done at Yale, which was reported in the Journal A. M. A. sometime ago. These investigators treated pregnant animals with neosalvarsan and later killed the animals. They found fairly large amount of arsenic in the maternal liver and in the placenta, but practically all the tissues of the foetuses were negative for arsenic. Apparently, the conclusion is that the foetus is protected by the storing up of arsenic in placenta.

Dr. Hebert asked for the explanation of the luetic child with apparently healthy father and mother. The only thing I see is that possibly the husband did have syphilis with a negative Wasserman, a so-called latent case.

SOME SUGGESTIONS IN PHYSICAL DIAGNOSIS.*

O. W. BETHEA, M.D.,
NEW ORLEANS.

It is not my hope in this brief discussion to present any matter of special or unusual interest, and it is entirely possible that some or all of these plans suggested have been tried out by most clinicians. But I have been unable to find them in literature, and as they have been of some real value to me, I am passing them on with the hope that they may aid someone else, even though it be in a limited way.

Fig. 1

Exposing the Chest.

It is well understood that for a thorough examination of the chest it is best to have the patient stripped to the waist; it is often desirable, however, to expose the back of a man when for some reason it is not convenient to have them sufficiently disrobe. When the two-piece underwear is worn it is customary to raise the shirts as shown in figure 1. This very imperfectly exposes the back. It will be found in these cases that the back can be fairly well exposed by the following plan:

Have the patient raise the arms out from the sides, as shown in Figure 2;

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Fig. 2

as the shirt is lifted as high as possible, then sweep the arms forward as shown in Figure 3, as the clothing is carried over the shoulders, then drop the arms as shown in figure 4. By comparing Figure 1 and Figure 4 the difference in the surface exposed for examination can be readily appreciated. Of course this will not apply where the patient wears a union suit.

Position For Examining the Back of the Thorax.

The most commonly used position is to have the patient fold the arms with the hands tucked in the axillae, or to fold the arms with the hands brought across to the opposite shoulders. The position that I suggest is to have the hands loosely locked and the patient bending forward until the hands barely touch the front of the body (see Figures 5 and 6). It has the following advantages:

1. It lends itself to relaxation.
2. It keeps the hands and arms still and eliminates the extraneous sounds (in auscultation) often produced by the patient's hands on his skin when the arms are folded in the usual way. These sounds which result from rubbing or scratching may very materially interfere with a careful examination.
3. It lends itself to comfortable respiration possibly better than does the folded arms.
4. This position also favors the separtion of the scapulae as well or better than the usual positions. This is shown in Figure 7, where the vertebral borders of the scapulae have been blue-penciled. In testing out this position I blue-penciled these borders in various positions and believe that I am correct in stating that the separation here compares favorably with that obtained by folding the arms.

Palpating the Apex Beat of the Heart.

It has seemed to me that this can sometimes be located by "ulnar paipation" when other measures fail. (See Figure 8.) The palm of the hand may be either down or up as the ulnar side of the hand and the little finger is placed in the various intercostal spaces.

Developing Crepitant Rales.

The usual routine is to have the patient exhale and then cough, this being followed by a deep inhalation. The plan that I suggest is to have the patient forcibly exhale then wait as long as comfortable, then deeply inhale. It seems that this period of rest after a forced exhalation possibly gives a better opportunity or the agglutination of surfaces, the preparation of which gives rise to the sound that is sought.

Fig. 3

Fig. 4

Preparing the Surface For Auscultation.

In examining the front of the chests of men the presence of hair often interferes with auscultation. The usual suggestion is to moisten this hair before examination. This does not always permit good work, particularly with the Bowles' stethoscope. The area in which the hair will interfere is usually small and I have found it much better to shave and dry this area before beginning the examination.

Proper Breathing For Auscultation.

One of the greatest difficulties in listening to the pulmonary sounds is to have the patient breathe right for an examination. I have often found it of considerable advantage to teach the patient how to co-operate by proper breathing before beginning this phase of the examination. I do this by holding my face where the patient can hear my breathing and I at the same time can watch the movements of the patient's chest, and then having them *breathe with me* until they have obtained the desired rate and depth. I then tell them to continue to breathe just that way until directed otherwise.

Examinaion of the Chest After Removal of Adhesive Plaster.

When a side of the chest is strapped

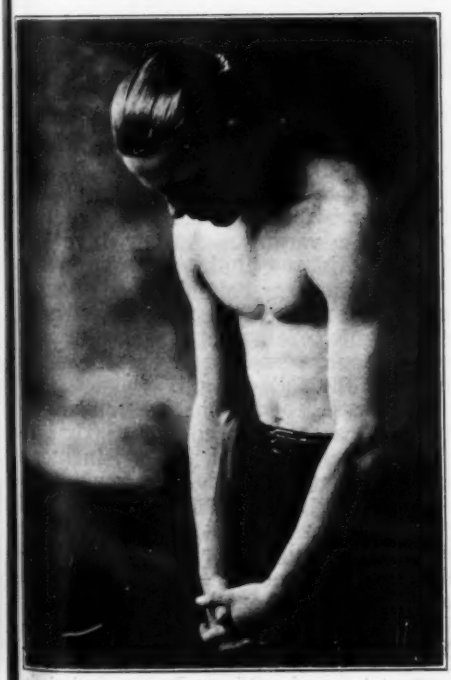

Fig. 5

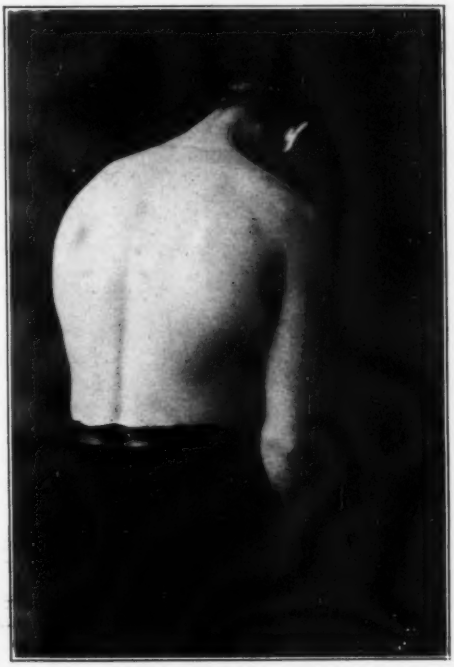

Fig. 6

Fig. 7

with adhesive plaster the function of the lung on that side is impaired and the other side takes on a certain amount of compensatory activity. On the side strapped not only is the lung proper

Fig. 8

compressed, but the muscles of respiration are interfered with very much in the same way as would the muscles of a hand that was put in splints. After the strapping is removed it may be quite some time before the normal function is restored, even where there is no pathology. This condition would obtain very much as would be the case in the hand kept in splints for several days. It would seem desirable, therefore, when there is any doubt as to the findings after removal of adhesive to re-examine, after a period of some hours at least, before attaching too much importance to the findings, as compared with the other side of the chest.

FURTHER OBSERVATIONS ON THE OPERATIVE CURE OF PRURITIS ANI AND VULVAE.*

CARROLL W. ALLEN, M.D., F.A.C.S.
NEW ORLEANS.

In April, 1920, I presented before the meeting of the American Medical Association some observations on the operative cure of pruritus ani and vulvae. Since this time I have had considerable further experience and wish to again bring this matter before the profession with some further observations.

Since I have undertaken the study of this condition there have been some reports by Murray, Hirschman, Ward and others, who have been able to incriminate streptococcus fecalis as a causative factor and isolated it for the purpose of making a vaccine. As my investigations antidated their reports on this work and as they only obtained about 50 per cent cures after many months of treatment I felt that anything which offered more immediate results should be carefully followed up.

As a result of my observations on numerous cases I am convinced that reflexes have but little, if any, influence in producing this condition, or if they are productive factors the removal of these causes by operative or other means is not always followed by a subsidence of the pruritus once it has become established.

Among the measures which I adopted in my preliminary study of this sub-

*Read before the Orleans Parish Medical Society, January 28, 1924.

ject, were alcohol and quinin injections, but these were abandoned after a time as the results were too transient or disappointing in other ways.

Observation made by injections of the pudic nerve have convinced me that this nerve plays no part in the affection.

I am quite willing to believe that some specific infection is the factor in producing this condition as the involved parts do not conform to the recognized distribution of any particular nerve. The thickened and leathery appearance of the involved parts may also add to this view, although this condition may be entirely the result of frequent scratching and rubbing, which these patients so often indulge in in a futile effort to obtain relief.

Whatever the cause may be if we have an operative remedy that is prompt and efficient I feel we should avail ourselves of it until something better is found.

I quote the following from my original report as the operative technic has not been improved upon, but some observations made on recent cases may somewhat modify my views regarding the efficiency of dividing the inferior pudendal nerve, particularly in cases where the involvement was not extensive and involved only the posterior surface of the scrotum or lower half of the vulva, in addition to the anal circumference. In these cases a simple dissection made subcutaneously into the area between the coccyx and perineum and a division of this nerve on both sides has been followed by almost complete relief. In stout individuals, or where the dissection is difficult or the nerve not readily found, a fairly deep crescentic incision made mid-way between the coccyx and anus, with the horns turned toward the perineum and carried out about two inches on each side of the mid line, has very effectively divided the inferior pudendal as well as all coccygeal nerves which run forward in this area. This last operative procedure has proved quite effective whenever used and while I prefer the operation as first proposed in the typical case one occasionally meets complicated conditions associated with fistuli or hemmorrhoids, in which it is inadvisable to do any more surgery around the anal margin than is absolutely necessary.

I give below the original description of the operation, which has proved so effective in my hands.

"The proposed operation has in view the separation of the skin from the underlying tissue, thus dividing all nerves which reach the affected parts, rendering them anesthetic and preventing the skin from immediately healing to the underlying tissues by packing, which is kept up until a firm bed of granulation has formed which usually requires about one week, when the packing is discontinued the skin is allowed to fall back in place, where it soon is again firmly united, leaving an anesthetic area which nearly equals the extent of the undermined area. This anesthetic area is not complained of, but is usually a quite welcome change. It gradually diminishes in size with the return of normal sensation after a few months, and has in my experience not been followed by a return of the pruritis.

The operation on the anal region is the simpler. The area involved must first be accurately determined. It is usually quite symmetrical and uniform on both sides. A series of incisions are now made beginning at the anal margin and continued outward to about one-half inch beyond the affected area, which rarely exceeds two inches. A series of these incisions are made about one inch apart at their peripheral extremities until the entire perianal region has been covered.

These skin strips are now dissected up, preferably with a scalpel, except at their two ends, which are left attached. In separating the skin from the subcutaneous tissues, but a small margin of tissue is left attached to its under surface to insure a sufficient circulation to prevent sloughing. As the pruritic area rarely involves the mucous surfaces the incisions need not invade them, and in a few cases where the vaginal mucosa seemed to have been involved, it cleared up with the relief of the external parts. The operation on the vaginal outlet is performed in the same general way as on the anal region, and should need no special description. After dissecting up the skin flaps, the space beneath is packed with iodoform

gauze. Frequent sitz baths with a liberal supply of soap has always been insisted on as an after-treatment. They keep the parts cleansed and are more effective and comfortable than irrigations. The packs may occasionally need changing, but often remain the full time, about one week. After the packs are removed, the parts quickly unite and the total disability is about two weeks.

In considering this operation in the light of the recent bacteriologic investigations of streptococcus fecalis, it is possible that the iodoform plays an antiseptic role here, or, more likely, the soap, which has been proved a quite active germicide and in the exposed condition of the tissues may eradicate the infection, if such is the cause; or should we take the other view that the prolonged anesthesia of the parts effectively breaks up the itching and scratching habit, the fact is that the patients get well and, as far as I have been able to follow them, remain well."

There was one case, which I operated upon last year, which was badly complicated by an anal stenosis, the result of chronic ulceration and which left me in a rather unsatisfactory condition and I have not heard from her since. With this exception I have followed all cases and there has been no recurrence as far as they have reported to me.

SOME PROBABLE FUNCTIONS OF THE SPLEEN AS DEMONSTRABLE BY THE EFFECTS OF RADIO-ACTIVITY UPON THAT ORGAN.*

ADOLPH HENRIQUES, M.D.,
NEW ORLEANS.

Assistant Professor of Medicine (Radiology), School of Medicine, Tulane University.

The functions of the spleen, in the past, have been very obscure and, to judge by the statements of current textbooks of physiology, are still more or less problematical. In this paper are recorded personal observations noted by the application of Radium or X-rays over the splenic area, through the skin of the abdominal wall. The term radio-activity is employed to indicate both X-rays and Radium, as it is generally accepted that the effects of the two agents, in equal dosage, are quite similar.

The diminution in size of an enlarged spleen, so frequently noted following the application of radio-activity to it suggests the probability of a stimulation of function, as indicated by certain effects coincident with its shrinkage. The writer believes that the stimulation of the non-palpable spleen has also been effected by this method.

The effect of the application of radio-activity to the spleen, to be discussed in this paper are:

1. Relief of capillary hemorrhage.
2. Increase in hemoglobin.
3. Increase in red blood cells.
4. Decrease in white blood cells.
5. Stimulation of immune bodies.
6. Effects on other organs.

The observations are based upon the treatment of several cases of myelogenous leukemia, one case of pernicious anemia, one case of splenic anemia or Banti's disease, one case of tuberculous peritonitis, and one case of extensive pulmonary tuberculosis complicated by ileocaecal tuberculosis.

1. Relief of capillary hemorrhage.

In myelogenous leukemia the writer noted the attacks of bleeding from the nose were overcome by radium over the spleen.

In connection with the relief of hemorrhage by irradiation of the spleen, Nagy (1) reports:

"Irradiation of spleen with a stimulating dose of the X-Rays was found to increase the coagulability of the blood in cases of hemoptysis, hemophilia, abdominal hemorrhage, and the hemorrhage following minor operations, Prophylactic irradiation diminished the hemorrhage of tonsillotomy and adenotomy. The effect was noted in a few minutes and lasted for from two to fourteen days or longer."

Nagy recommends such irradiation in cases of hemorrhagic diathesis, hemophilia, purpura, pulmonary and renal hemorrhage, menorrhagia, bleeding myomas and other hemorrhagic gynecological diseases, childbirth, bladder hemorrhage, and post operative hemorrhages, and as a prophylactic measure before operation.

Nurnberger (2) reports:

Of 25 patients suffering from uterine

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hemorrhage, 18 were permanently relieved by the treatment. In several cases the bleeding stopped within ½ hour of the treatment. In the majority cessation took place on the third day, which is the day on which the coagulant factor reaches its highest intensity. One fourth the erythema dose was given. If as rarely happened, no effect was obtained, three days later an additional thwo-thirds was given.

Schmitz and Bundy (3) state:

"The menorrhagias or metrorrhagias accompaning adnexal disease and the pernicious bleeding from different parts of the body during the pregnant state are often intractable to the usual forms of treatment. Though the adnexal disease may be clinically or surgically healed, uterine hemorrhage may persist even after repeated curettages. These hemorrhages respond almost immediately to an exposure of the spleen to a stimulating dose of rays of about 15% erythema skin dose. Should the bleeding persist after 24 hours, twice the dose is given."

2. Increase in hemoglobin.

3. Increase in red blood cells.

Both hemoglobin and the red blood cells were markedly increased after treating the spleen by Radium in cases of myelogenous leukemia. Within 90 days after beginning treatment the hemoglobin was raised in one case from 54% to 90%. The red blood cells were markedly increased from 2 million to 5 million and above within 90 days in several instances.

In a case of pernicious anemia, with no splenic enlargement the red count of 400 thousand was increased to 2 million in 5 weeks and from 2 to 5 million in 3½ months later. The hemoglobin in this case increased from 25% to 50% within 5 weeks and to 85% within 8 weeks. Although this case of pernicious anemia subsequently died, the marked effect of radiation in stimulating regeneration of the blood is worthy of note.

The spleen was concerned in the increase of hemoglobin and red blood cells. The effects followed the application of the Radium. The mechanism of the process cannot be stated, it is probable that the more complete and more rapid liberation of the iron from the effete red cells brought to the spleen was an important factor in this change. This iron sent by the liver to the bone marrow resulted in an increased number and richness of the red cells.

Moynihan (4) states:

"Changes in the blood which agree with those found in splenectomized animals. There is a temperary anemia, gradually subsiding in approximately two month's time, and there is an increase in leucocytes, whose number return to the normal very slowly."

If anemia and leucocytosis mean lessened splenic function, then improvement in red blood and decrease of leucocytes point to increased function.

4. Decrease in white blood cells.

The effect of radio-activity on the spleen is very marked where the white cell count is high. This is clearly seen in those cases where the neutrophiles are in excess as in myelogenous leukemia. Irridiation may effect a marked reduction in the white cells from a height of 800 thousand to within 20 thousand within a relatively short time, a few weeks period. The leucocytes are especially susceptible to the action of radio-activity anywhere in the body, the lymphocytes most of all. It has been argued that the effect of irradiation of the spleen is on the circulating blood within it. If this were so, then irradiation of the limbs would produce a greater fall in the white count than irradiation of the spleen. However, this is not the case, as irradiation of the spleen produces the greater decrease, indicating a special effect upon the spleen itself aside from any effect upon the blood circulating within it.

How intimately the destruction of leucocytes is concerned with the production of immune bodies or antibodies we do not know at present although the physiologists favor the view that bacteriolysins are formed both by the intact and by disintegrating leucocytes.

Kolmer (5) states:

"It is probable that the endolysins act not only on bacteria that have been phagocytosed, but also upon free bacteria when liberated through disintegration of leucocytes."

More recently Carrell (6) states:

"Leucocytes, according to their condition, set free substances of varied nature. Trephones are secreted by nor-

mal cells, or diffuse from dead cells before the onset of disintegration."

These trephones stimulate the proliferation of epithelial and of connective tissue.

"Murphy recently found that, after an animal has been exposed to roentgen rays, lymphocytes divide in its serum more readily than in that of an animal which has not been irradiated. This effect may be attributed to the destruction or stimulation by roentgen rays of lymphocytes and the setting free of trephones in the plasma, which then becomes less inhibitory for cell proliferation. A similar weakening of the growth restraining power of plasma under the influence of trephones may cause, in part, the response of the organism to protein therapy. It is possible that the growth promoting properties of leucocytes are utilized by the deseased organism as fully as their power of opposing bacteria and other foreign substances."

5.The stimulation of immune bodies.

"Pfeiffer and Mark (7), in investigating the formation of immune bodies in cholera found that the spleen and the medulla of the long bones contained a far larger proportion of these substances than any other part of the body; and this reservoir, so to speak, of defensive substances continued for many months, until the bactericidal properties in the blood were slowly brought up to the standard found in the spleen and the bones. They also found that immunity could be developed in an animal whose spleen had been removed some months before; but if the production of immunity was attempted and the spleen then at once removed, the immunity failed to develop. In 1891 Bardach injected 25 normal dogs, and 25 dogs from which the spleen had been removed, with 1 cc of an anthrax culture. Of the 25 spleenless dogs, 19 died; of the 25 normal dogs, 5 died."

Morris and Bullock (7) took 88 rats and splenectomized under ether. A similar number were treated by abdominal castration as a fair basis of comparison of the effect of operative trauma alone upon the subsequent health of the animals. They injected both sets of animals with a subcutaneous sublethal dose of broth culture of the bacillus of rat plague. Of the castrated rats, 22.7 per cent died; of the spleenless rats, 87.5 died."

Quoting Moynihan further: "Hektoen's experiments appear to show that antibodies are produced in the spleen, lymphatic tissues and bone marrow." "So far as I am aware, no observations to support these conclusions have yet been made on man. But the evidence as to the defensive properties of the spleen which these experiments reveal is so strong that remembrance of this function of the spleen should always be borne in mind when the operation of splenectomy is under consideration."

Eleven years ago Dr. J. M. Batchelor referred a case of extensive peritoneal tuberculosis for X-ray treatment. The patient had had 7 laparotomies within 3 years and a persistent sinus. The last opeation was by Dr. Batchelor, who reported everything within the abdominal cavity was studded with tubercles. Under very mild X-radiation over the entire abdomen the patient responded well. Sixty-five treatments were given over a period of 18 months. The sinus had healed promptly and the patient seen a few days ago was free from all symptoms; well for a period of 9 1-2 years since her discharge.

C. S. referred by Dr. R. Matas with an extensive pulmonary tuberculosis complicated by an ileocaecal tuberculosis. The pulmonary lesion was quiescent, the patient's principal symptoms referable to the ileocaecal region. For 3 1-2 years there were frequent attacks of pain, distention, indigestion, with marked loss of weight and strength. The presence of the pulmonary lesion together with the mottling of the caecum on X-ray examination (described first by Stierlin as indicative, later by Lawrason Brown of this country as characteristic of ileo-caecal tuberculosis), justified the diagnosis of ileo-caecal tuberculosis. Small doses of X-rays to the abdomen, excluding the liver, but including the spleen, have resulted in a prompt increase in weight and strength which have been maintained, and practical absence of symptoms in four months. A re-examination of the ileo-caecal region within the week shows a practically normal appearance of the caecum and ascending colon. Increasing intervals of treatment corresponding to the steady improvement should permit this patient's discharge shortly. The complement fixation test a few weeks ago was negative. The prompt recovery of this patient justifies the belief that improvement was accelerated by stimulation of his spleen by radio-activity. In this connection, there is a growing tendency to treat the spleen by small doses of X-rays as an adjuvant in the treatment of pulmonary tuberculosis.

6. Effects on other organs.

To attempt to describe the relation of the spleen to other organs, including the liver, at this stage of our knowledge, would be foolhardy. However brief mention should be made of the effects

of a radio-activity upon a case of splenic or Banti's disease—a case with marked splenic enlargement, hepatic enlargement, anemia, indigestion, ascites.

This patient, a child of 10 years, referred by Dr. W. W. Butterworth in May, 1922, showed the above symptoms and had been ailing for 1 1-2 years previously. Radium applications were made monthly and improvement followed the first series of applications the spleen and liver diminished in size and the ascites disappeared. Five series of applications were made to December, 1922. In December, 1922, and February, 1923, X-rays were applied to the spleen. The boy's mother was directed to return him for monthly observations, but owing to press of other affairs failed to do so. This child was seen a few days ago and the mother considered him well as he showed no symptoms of indigestion, had gained in weight and looked well. Examination revealed no hepatic enlargement; the spleen was soft and about one-half to two-fifth its previous size. The mother was informed the child was not cured and instructed again to return for treatment.

This case, 20 months after treatment was begun, has maintained a marked improvement; whether we describe it as splenic anemia, Banti's disease or cirrhosis of the liver.

Naunym and others consider that splenic anemia is merely a type of hepatic cirrhosis in which the liver changes are relatively slight, at least until the final stages are approaching.

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DISCUSSION.

Dr. A. C. King: I would like to ask Dr. Henriques about cervical adenitis of tubercular origin. These cases are very interesting from a surgical standpoint and operation is not always successful.

Dr. A. Henriques (closin): In answer to Dr. King, as far as tubercular adenitis is concerned, I have had a number of these cases and they have responded very well by X-ray treatment of the enlarged glands, directly over the glands. I think in the future, in view of all the information we are disclosing about the spleen, that I shall also treat the spleen when called upon to treat cases of tubercular adenitis with the x-ray.

RELATIVE VALUE OF PERCUSSION AND X-RAY IN CARDIOLOGY.*

A. E. FOSSIER, A.M., M.D.,
NEW ORLEANS.

The accurate delineation of the heart is essential in diagnosing diseases of that organ, for one of the most, if not the most, important factor in the diagnosis and prognosis of cardiac conditions is the mapping out the size, shape and position of that organ.

Unfortunately in this day of instrumental diagnosis, percussion is becoming more and more a lost art, its value unrecognized and to a great extent it has been superceded by the X-ray.

It is the purpose of this paper to consider the relative value of percussion as compared to the X-ray in the delination of the heart borders.

Orthodiagraphy and teleradiography have not given results sufficiently accurate and illuminating even in the hands of the most skilful cardiologist and radiologist. It is the consensus of opinion among the most skilful radiologists that in the diagnosis of heart conditions very limited information is to be had from this means. Sir James Mackenzie in Oxford Medicine voices the opinion of many of our leading cardiologists in the following:

"Indeed I am doubtful if an X-Ray examination of the heart has ever thrown the slightest light on a cardiac condition."

And also the continuing:

"Like the modification of the stethescope, the modification of the X-Ray methods by orthodiagrophy and teleroentgenography has been of little practical use."

The X-Ray has not given us a basis on which we can determine the narmality of the heart size. The normal heart size of the radiologists is very much greater than that determined by the anatomists. To this day the difference between the two has not been reconciled or explained.

The most patent difficulties often resulting in delineating the heart's area by means of the Roentgen rays, are:-

(1) Approximately only one third of

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the circumference of the heart's silhouette is usually shown in the skiagraph.

(2) Inability of mapping accurately the lower border of the heart from the upper margin of the liver.

(3) Frequent invisibility of the heart's apex because of being imbedded in the diaphragm.

(4) Influence of respiration and expiration on the size of the heart.

(5) Difficulty of radiographing heart at proper respiratory phase.

(6) Occasional influence of the shadows caused by the sternum, spinal column and the great blood vessels in determining the cardiac borders.

(7) Extreme variability in the size of the transverse diameter.

(8) Frequent inability to detect the apex, making the determination of the longitudinal diameter only approximative and inaccurate.

(9) Variations in the size of the heart in its systole and diastole.

(10) Variability in size, shape and position of the heart in individuals having high and low diaphragms.

(11) Divergence of the rays is always an important factor of error.

(12) All extra-cardial structures, the pericardium, pericardial fat, pericardial blood vessels are included in the heart's silhouette and cause more or less distortion of the shape and enlargement of the size of the heart's shadow.

(13) Slipshod technic, improper distance of tube from plate, inaccurate focussing, are sources of great errors.

(14) Size, shape and deformation of the chest.

(15) Changes in heart's size and shape due to changes in posture.

(16) Lack of correlation in the size of the radiologic and anatomical heart.

Accurate percussion gives the following advantages:

(1) Delineation of the whole heart.

(2) Heart accurately made out in size, shape and position.

(3) Patients percussed in the recumbent posture.

(4) Heart may be differentiated from the liver.

(5) Both the transverse and longitudinal diameters are available.

(6) Percussion of the heart itself and not its pericardial appendages and foreign structures can be made out.

(7) Apex can always be made out. (Exceptions are exceedingly rare)

(8) Shading of dullness and resistance due to a difference in density between the fat and cardiac tissues.

(9) Close approximation in the size of the percussed and anatomical heart.

(10) Correlation of the size of the clenched fist and the heart thereby determining its normality.

(11) Heart area can be more accurately measured.

(12) Always available, quickly done, and can be repeated at will.

The exaggeration of the heart size increases proportionately through its size and through its position. This difference is greatly reduced in the vertical heart, (the long narrow heart commonly called the drop heart), and it is increased proportionately as the heart increases in its obliquity and in the greater length of its transverse diameter. In other words, the narrower the transverse diameter the less the exaggeration of the cardiac shadow, the larger the transverse diameter the greater the exaggeration. It is then apparent that this exaggeration proportionately increases with the size of the heart. The reasons for this phenomenon are many, but the main two are; first, the parallelism of the rays is not absolute, even at a great distance, and certainly not so at a distance of six feet from the target to the plate, yet in this country this distance is generally accepted as sufficient. According to Vaquez and Bordet,[1] the distance of one meter, a meter and a half or even two meters, give too considerable exaggeration of the heart's silhouette. It is only at two meters and a half that the exaggeration of the heart's shadow is reduced to its practical minimum, that is, the projection of an object fifteen centimeters in size is augmented by only four or five millimeters.

They also insist that in radioscopy of precision it is necessary for the tube to be accurately centered on the region to be studied. The method practiced by Vaquez and Bordet[1] is the best and the most exact of any of the others recommended. The following is a proceedure advocated by these authorities:

"We illuminate the radioscopic screen and by means of a diaphragm with a circular opening we so adjust it that the

image of the heart is exactly contained in the interior of the luminous circle, the diameter of which should correspond exactly to the greatest diameter of the heart. We then fix the patient and the tube in their respective positions; we give the diaphragm a greater opening, we place a plate instead of the screen or between the screen and the thorax and set the apparatus in action."

Bardeen[2] claims that the most practical distance is two meters; he also states that at this distance there is a sufficient dispersion of the rays to make it necessary to allow for enlargement of the heart's silhouette over cardiac outline.

For reasons already explained the transverse diameter of the cardiac silhouette presents such variations in size as to render the diameter absolutely unreliable in determining whether the heart is enlarged. Bardeen[2] says "We have therefore discarded the transverse diameter of the heart's silhouette in favor of the area as a means of estimating the relative heart size."

The linear measurement of the longitudinal diameter beginning at the intersection of the right contour of the heart and the origin of the blood vessels extending to the apex is equally unreliable for determining the normal size of that organ. Alfred Cohn[3] says "The difficulty of locating the apex precisely in a photographic plate makes the estimation of the long diameter inexact."

The measurement of the area of the heart was then suggested to determine the normality of its size, but because of the inaccuracy of the transverse and longitudinal diameters it proved of dubious help in the diagnosis of cardiac conditions. Cohn[3] says: To delimit the area of cardiac shadow requires that the extremities of the lines representing the right and left borders of the heart be joined by curved lines drawn arbitrarily. With experience these lines are properly drawn by different observers in a consistent manner, but no doubt each observer draws them differently. But the complete outline fails in exact representation also because of the difficulty, indeed, often because of the impossibility of locating the apex in certain individuals. On being able to locate this point accurately depends the value of the measurement, both of the long diameter and the area."

Bardeen[2] claims that an accurate outline of the apex is the chief difficulty that confronts one when he attempts to complete a line to the lower border of the heart.

The following conclusions reached by H. W. Smith and W. A. Bloedern[4] in their excellent essay on the size of the normal heart, reflect the generally accepted opinion of radiologists; "The method employed (Bardeen's) does not furnish satisfactory standard by which to determine if the heart is abnormal in size. The failure not being due to method, but to great and unexplained variability in the organ studied, the difficulty still remains whatever means to ascertain the size of the individual heart under consideration. Hence any conclusion as to the relative size of the heart, based on comparative dimensions, ratios, or relation to body landmark is fallacious and should be applied clinically with great reserve."

The size of the normal heart must first be determined before we can recognize its abnormality. The radiologists have tried to give us the basis of normalcy, but unfortunately all their tabulations, formulae, have been more or less barren of very accurate results. Of course an enormously enlarged heart will be shown as such on the plate, but when it is considered that the greater the size of the heart the more is its exaggeration and often a smaller part of its contour is visible, and the more it is imbedded in the diaphragm, this diagnostic means loses a great deal of whatever value it may have.

But when it is a matter of a slight dilatation or enlargement, a question of which side is enlarged, or when it is necessary to make out its full contour to determine a pathological condition, then the X-ray is of doubtful utility.

The second reason for the exaggeration of the heart size, especially in the obese who have a high diaphragm and with the apex pushed upwards, is pericardial and extra-pericardial fat. This fatty cushion surrounding the apex of the heart is distinguishable from the cardiac tissues by percussion.

Hirschfelder[5] says that fat may be deposited in the heart in solid masses of adipose tissue, especially in the pericardium in fat individuals, particularly in those addicted to alcohol, and it is

very often associated with coronary sclerosis. This condition is designated as fatty infiltration or obese heart. He also mentions that in normal hearts there is a considerable amount of fat 30 to 60 gm. ((1 to 2 ounces), collected just beneath the endothelial layer of the pericardium, along the auricoventricular and inter-ventricular groves (coronary, longitudinal sulci), at the base of the artery and scattered elsewhere over the heart. It has been shown by W. Muller,[6] Hirch,[7] Kirch,[8] that the weight of adipose tissue may actually exceed the weight of cardiac muscles.

The teleradiographic examination of these hearts showed great enlargement over the normal, the percussion revealed a heart the size of the patient's fist, which manifested no clinical evidence of any cardiac pathology. The difference of resistance and of the percussion note over the adipose tissue is readily recognized from that of the heart.

G. Schwartz[9] called attention to this source of error from a radiologic standpoint and proved that the left cardiodiaphragmatic sinus, instead of being clear, is filled by a shadow, less heavy, it is true, than that usually cast by the heart, and proved this to be caused by the presence of fat.

A thorough search of the literature on this subject failed to reveal any reference pertaining to the recognition of this source of error by percussion, and as far as I can ascertain this is the first time the same has been called to the attention of the profession.

The question now arises, what is the size of a normal heart, and how can it be determined? The normal size of the heart of an individual is the size of his clenched fist. This fact was brought cut by the celebrated Laennec, and accepted by the leading authorities on anatomy. Davis in his anatomy says: "The heart is somewhat larger than the clenched fist." Cunningham in his book on anatomy also mentions that the heart is roughly estimated as being about the same size of the closed fist.

The size of the normal heart handed down from the great Bouillaud[10] in 1840 to the present time varies according to different authorities from 8.7 to 9.0 cm., at its broadest, 5.8 to 6.2 cm., at its thickest and 12.0 to 12.5 cm., from its base to its apex. A study of tables of the size of normal hearts as shown by the X-ray in orthodiography and teleroentgenography by Clatyor and Merrill,[10] Bernard Smith,[11] Dietlen,[12] Bardeen, R. Lutembacher[13], and others, give the size of the transverse diameter to be from 10.7 to 14.4 cm., and the longitudinal diameter from 11.8 to 15.8 cm.

The reader had the opportunity of observing in Camp Beauregard in the fall of 1917, 257 soldiers with normal hearts. These hearts were made out by percussion and special attention paid to determine the transverse and longitudinal diameters. The heart at its broadest, or its transvers diameter corresponded closely to the figures given by the anatomists, the average being 9.0 cm., with a minimum of 8.0 and a maximum of 10.5 cm. The longitudinal diameter gave an average of 9.27 cm., and varied from 7.5 to 11.4 cm. The linear measurement of the transverse diameter was in nearly all cases approximately that of the longitudinal.

Vaquez and Bordet[1] in their book "The Heart and the Aorta," published in 1920, write the following:

"In the recumbent position, as we have said, the two diameters, longitudinal and horizontal, are perceptibly equal. Sometimes, however, the first is greater than the second, by from 5 mm. to about 1 cm. in exceptional cases it is less by several millimetres. In the standing position the longitudinal position may be increased a little, which is, however, very rare, on the contrary, the horizontal diameter always diminishes. It then becomes inferior to the other by from 5 mm. to 1 cm."

This correlation of the clenched fist and the heart is constant, and is the only practical determinator of its normalcy. The slightest pathological variation of its size may thus be recognized with a greater degree of exactitude than is possible by any other method. I have found that the transverse diameter corresponds to the linear measurement of a line beginning at the juncture of the inner side of a hand and the wrist, and ending at the middle joint of the fourth finger. An individual with a large fist will have a corresponding large heart, and one with a small fist will have a small heart. The correlation of the size and shape of the hand and that of the stature of the individual

is likewise constant. Tall, slim persons of the visceroptotic type, with vertical heart having a small transverse diameter, have long narrow hands; those who have a high diaphragm with heart showing marked obliquity, have wide stocky hands. Furthermore the size of the hands as well as that of the heart are influenced by the same factor, physical work. It has been observed that vocations involving manual labor affect the breath and thickness of the hand, and not its length. The simplicity of the percussion technique used, the ease with which it is learned, the correctness of its results, and its great value in diagnosis, commends itself for its more general use by the profession.

The following quotation taken from Thomas Lewis is appropriate:

"That the value of a method of diagnosis is to be assessed, not by the success with which it is employed in special trained hands, but by its success when employed by the average medical man. When a professed expert introduces a new diagnostic test or revives an old one, even though he may be able to show that in his hands it has great value, which is not always the case, yet by his advertisement he will do more harm than good unless he is able to state the method of his test so clearly, and unless the test is so simple, that it is easily acquired and used by the majority of his professional brethren. Assuredly the method would be attempted on his authority, whether rightly or not; as it is perfectly well known in specific instances, the test may be properly applied and quite erroneous conclusions drawn from it. I allude especially to methods of estimating the size of the heart and to the close differentiation of various types of cardiac murmur which are treated at length.

In regard to electrocardiography, I should say that it has value in elucidating irregularities on occasions, but that its indiscriminate use is much to be deplored."

This could also be applied to the rays!

The time allotted being too short to enter into a discussion of the relative merits of various methods of percussion, and to speak of the technique employed by me, I wish to state that to anyone who may be interested and who may wish a demonstration, my time is at his disposal.

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DISCUSSION.

Dr. Leon J. Menville: I am not here to defend the science of roentgenology as it needs no defense in this instance as it is based upon known laws of physics and electricity.

We are all firm believers in percussion, some more adept than others: Dr. Fossier's ability along this line is well known; but I would like to inform him that the apex of the heart is not as difficult to visualize as he would have us believe. By taking a tablespoonful of a solution made with the white powder of a seidlitz powder and the same amount from the blue powder, the patient will show after swallowing these solutions a small gas bubble in the cardia of the stomach which will clearly outline the apex

As Dr. Fossier has quoted the work of Vaquez and Bordet on the Heart and the Aorta, I might mention that the book is an X-ray one, and that Dr. H. Vaquez is a renowned French internist, and I would like to mention what they have to say on the mensuration of the heart by the X-rays. "To prevent deformations due to the X-rays the patient should be placed from 2.5 meters to 3 meters from the target of the tube and at this distance the rays which arise from the target of the tube take a perceptible parallel direction and strike the circumference of the heart grazing it at almost equal angles: The parallelism of the rays is not absolute, but the errors of projection are insignificant." And it is for this reason that I am taking my measurements at the distance of 8 feet.

THE VALUE OF THE ROENTGEN RAY IN THE DIAGNOSIS OF GALL STONES.*

LEON J. MENVILLE, M.D.,
NEW ORLEANS.

Radiological Division, Dept. of Medicine, Tulane University.

It was in the year 1900 that Carl Beck, of New York, showed the first X-ray plates of gall stones. His presentation elicited favorable comment by the internists and surgeons of the time. A reasonable inference was that with better apparatus and improved technique, gall stones would be shown in a very large percentage of cases. Promptly upon the heels of this enthusiasm came a feeling of distrust from many who had great faith in the X-ray diagnosis of gall stones; this was brought about by the comparatively few report from Roentgenologists showing gall stones on X-ray plates.

In 1910, Pfahler, of Philadelphia, reported three positive diagnoses of gall stones, and Haenisch, of Hamburg and Cole of New York, each reported three positive diagnoses on the same occasion. Following the year 1910, we find increased frequency of positive reports. In 1914 Pfhaler of Philadelphia,[1] makes the statement that he believed 50 per cent of gall stones can be demonstrated on an X-ray plate. There were many who thought that he had quite overshot the mark. Next came a report from Caldwell[2] in 1915, protesting against the making of positive diagnoses on the insufficient evidence of very indefinite shadows. He says, "It is very easy to make a roentgen diagnosis of gall stones. The difficult thing at present is to avoid making such a diagnosis occasionally when no stones are present." Not that Caldwell's faith in the diagnosis of gall stones with the X-ray wavered, but he was for conservatism.

That the value of the X-ray as a means of diagnosing gall stones was accepted by many with reluctance and misgiving, is well known to all Roentgenologists and even to this day, there are quite a number who are skeptical of its practicability. I wish to inform you that today, the X-ray is of great value in the diagnosing of gall stones.

Drs. Carman, McCarthy and Camp[3] of the Mayo Clinic, read a paper in December, 1923, before the North American Radiological Society, in which paper they reported that out of 226 cases operated upon, and gall stones found, 78 cases had been previously diagnosed as positive with the X-ray and 139 were reported negative, giving the X-ray a 38.4 per cent positive diagnosis.

With the improved technique as used by Carman, we can in all honesty state to the internist and surgeon, that we can now make possible a positive diagnosis of gall stones in from 30 to 40 per cent of all cases, and I feel quite certain that it will not be long before we can materially add to this percentage.

A negative X-ray examination for gall stones is valueless, and we should view with grave suspicion the Roentgenologist who would impress us with the value of his negative report.

It is of scientific interest to learn why we have been unable to demonstrate as many gall stones as we do in urinary stones.

(4) It is becoming clearer in late years that the primary formation of gall stones is itself largely depended upon stagnation of bile, such as may arise in the gall bladder if an intermittent or incomplete closure of the cystic duct be brought about by such things as tight lacing, pregnancy, or even the unequal sagging of the abdominal viscera. Then, although some bile moves in and out of the gall bladder, there is stagnation, and even in the clear, uninfected fluid, cholesterine crystals may separate out and cluster about a central point until there is formed a solitary round or oval, slightly roughened stone-like mass, which usually lies loose in the neck of the gall bladder. This is the first type named by Aschoof[5] and Bacmeister,[5] the (1) radial cholesterine stone, because it is composed of nearly pure cholesterine ($C_{27}H_{46}O$)—90-95 per cent cholesterine. The most common gall stone is the (2) mixed stone with a nucleus formed of cholesterine ($C_{27}H_{46}O$) and a mantle of calcium bilirubin ($C_{16}H_{18}N_2O_3$). (3) Laminated calcium cholesterine stones and the soft, blackish green, calcium bilirubin concretions, are usually formed in the hepatic ducts, more rarely get into the gall-bladder. (4) Pure calcium carbonate ($CaCo_3$).

Every substance absorbs some part of X-ray passing through it and, therefore, casts a shadow. However, some substances are much more absorbent than others and will cast a much darker shadow. This absorption or shadowing is about in proportion to the cube of the atomic number of the substance multiplied by its density.

I worked out and formulated a reference table of the absorbability of all the elements, which was presented in a paper at the Chicago meeting of the Radiological Society of North America[7], from which table I shall make an attempt to show why some gall stones will cast sufficient shadow to be shown on an X-ray plate while others do not, also why we may never be able to demonstrate all gall stones.

Let us consider first the almost pure cholesterine stone (90-95 per cent pure) with a chemical formula ($C_{27}H_{46}O$); in a molecule of cholesterine we have 27 atoms of carbon, 46 of hydrogen and 1 of oxygen: looking at our reference table we find that the absorbability rate of carbon is 3.416 and as we have 27 atoms we multiply 3.416 times 27 and we have 92.232

Hydrogen is .00072 times 46 and we have .03312

Oxygen is 5.803

Total 98.06812

absorbability rate of one molecule of cholesterine.

Let us study the more common gall stones, the mixed stone, which has a nucleus of cholesterine with a mantle of calcium, the calcium bilirubin stone.

We find that calcium has an absorbability rate of 121.114. Bilirubin ($C_{16}H_{18}N_2O_3$) by the same process as employed in calculating the absorbability of one molecule of cholesterine, we find bilirubin to be 78.7476: and the absorbability rate of cholesterine we have already found to be 98.06812; therefore the total absorbability rate of one molecule of calcium bilirubin gall stone is 297.92972 or three times more than that of one molecule of cholesterine, that is to say it will cast a shadow three times denser than that of a cholesterine stone If the more common gall stones with an absorbability rate of 297.92972 are difficult to demonstrate, how much more difficult is it to show those of an absorbability rate of only 98.06812. We have another variety of gall stones: calcium carbonate; unfortunately not so common as the calcium bilirubin stones, with a formula of ($CaCo_3$), the absorbability rate is, 141.939, on examining the absorbability rate of the calcium bilirubin stone we find that it has a rate of 297.92972, twice as great as that of the calcium carbonate stone. In reality this is not true, as in the instance of calcium bilirubin stone we allowed a full atomrate of calcium, and we are told that the calcium only forms a mantle and the amount must be small, therefore the absorbability rate or the shadow cast of the calcium bilirubin stone would be in proportion to its highest atomic number calcium, while in the instance of the calcium carbonate stone, there is always a full atom of calcium. The larger the stone the denser the shadow cast, a stone 2 cm thick will cast a shadow twice as great as one of 1 cm, provided the chemical compositions are the same. In the instance of the urinary stone, taking the calcium phosphate stone with a formula of $Ca_3(PO_4)_2$ we find that its absorbability rate is 543.038 and the shadow cast will be over three times that of the calcium carbonate gall stone and nearly five times greater than the cholesterine stone. It is quite evident therefore, why some gall stones will not cast a shadow upon an X-ray plate while nearly all urinary stones are demonstrated.

To emphasize the statement I have previously made that a negative X-ray examination for gall stones is without value, I have only to remind you that the very faint shadow cast by many gall stones while present but not visible on an X-ray plate, is due to the low absorbability rate.

Summary

(1) The X-ray is a valuable means of diagnosing gall-stones; from 30 to 40 percent. Positive diagnosis is now being reported.

(2) A negative X-ray examination for gall stones is valueless.

(3) The shadow cast by gall-stones is dependent upon their absorbability rate, the higher the rate, the denser the shadow.

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COD LIVER OIL AS AN ADDITION TO THE DIETARY REGIMEN OF THE UNDERNOURISHED DIABETIC*

J. BIRNEY GUTHRIE, M.D.,
NEW ORLEANS.

Diabetes is a disease involving most conspicuously, carbohydrate metabolism; and we are concerned with the problem of feeding these patients so as to supply sufficient protein to preserve nitrogen equilibrium and values energy adequate for the day's task, notwithstanding the relative inability to utilize the usual carbohydrate quota. The problem in the treatment of diabetes at the present time with insulin available is the same as at the time when it was first said, "The art lies in the feeding of the fats." The carbohydrate tolerance is readily determined by recording the daily intake of carbohydrate as such and reckoning 58% of the protein and 10% of the fat as glucose. The sum of these three factors is the total ingested glucose. The glucose excreted is compared with this and the glucose tolerance is determined. The minimum protein need is readily computed by multiplying the weight in kilos by 0.66 if there is occasion to restrict protein, or by 1.0 if no such need exists. The quantity of fat that may be consumed offers a more serious problem. Patients never die suddenly in diabetes from an excess of carbohydrate in the diet; but there is a long and a sad story of deaths from an excess of fat. Insulin has added much to the ease with which we can establish an adequate diet which will keep the patient at work and reduce his discomfort. However, even with its aid, we are at times quite anxious as to the ability of the patient to completely burn the fats necessary to furnish the total energy for the day's work.

Recent work on the subject by Woodyatt[1], P. A. Shaffer[2], Ladd and Palmer[3] and others has given us a mathematical basis by which we can calculate approximately how much fat it is safe to allow the patient. The calculation is in relationship of the glucose equivalent of the protein and carbohydrate elements to the fatty acids. In cases of mild diabetes and sometimes in the cases of severity we can arrange a diet that will furnish sufficient carbohydrate to ensure combustion of the needed fats. Insulin in low doses may be required in some of these moderately severe cases. The severe cases all require insulin; and even with insulin we must watch the fats most carefully. Often we are forced to do without insulin and resort to under-nutrition to get the patient sugar-free. In severe cases accompanied with emaciation we aim to feed all the fat that can be safely burned, consistent, of course with the energy needs of the patient and within the limit of safety so far as acidosis is concerned.

The patient often comes to us in a state of extreme emaciation, and when his test period is over, and a satisfactory maintenance diet determined, it is a matter of weeks before he is sufficiently built up to be able to return to usefulness and the day's task.

It is in this type of case that one needs all the factors possible to restore the patient to something approaching a normal state of nutrition. The revival of the use of cod-liver oil in cases of malnutrition which we have seen during the last three years has filled the literature and has impressed the writer with the necessity of securing for every case where any form of diet restriction is carried out, an adequate supply of the so-called vitamins. Cod-liver oil seems to be richer in the fat-soluble A. substance than any other known food-stuff. Zilva and Drummond[4] put the content of this substance in cod-liver oil at 200 times that of butter-fat. This figure was determined by experiments on white rats which were fed a diet deficient only in the fat-soluble A. substance. This basal diet was complete in every

*Read before the Orleans Parish Medical Society, March 10, 1924.

other respect. Various fats were then added to the basal diet and the quantity of these necessary to establish growth in the young animals, prevent rickets and xerophthalmia was measured. This method of study was practically the same as carried out by McCollum and Davis[5] in originally determining the existence of the fat-soluble A. substance. It is of interest here to note that McCollum denied the existance of any so-called vitamins excepting the fat-soluble A. and the water soluble B. substances. He has with his associates[6] called attention to the lack of identity of the antirachitic substance and the substance which cures the eye disease, xeropthalmia, and stimulates growth.

Cod-liver oil which is warmed and aereated by blowing air through it loses the power to cure deficiency xerophthalmia but preserves its antirachitic properties intact.

The experiments of McCollum and his associates on rats lead them to conclude that the cod-liver oil contains in abundance some substance which is present in butter-fat, the best food-fat we know, in very slight amounts, and which exerts a directive influence on bone-development, enables animals to grow with even an inadequate supply of calcium or phosphorus. This substance they consider as distinct from fat-soluble A. which is essential to growth. Simmonds, Shipley, McCollum and Park[6] believe that they have determined two distinct organic factors, operating in the nutrition of a mammal, which are associated with certain fats.

Experimental evidence is apparently negative as to the existence of McCollum's water soluble B. substance (antineuritic) in cod-liver oil. Heinrich, Lax[7] produced beriberi in pigeons by feeding polished rice and attempted to cure this by feeding cod-liver oil and extracts made from it in addition to the basal diet. The experiments failed to show any antineuritic element (Water-soluble B.) in the oil. Lax states that the A. substance is destroyed by heating to 80° to 90° C. and the B. substance by heating to 120°C. Codliver oil, he says, can contain neither because its preparation is usually at 130°C.

This conclusion seems at variance with most workers who have furnshed protocols of experiments showing that the A. substance, at least, is present together with the antirachitic substance.

Nothing is available to the writer to support a claim for the existence in cod-liver oil of the so-called vitamin C (anti-scorbutic) substance. It is fairly well determined through years of use that the oil in quantities sufficient to supply necessary amounts of the growth-favoring substance and the antirachitic substance, can be taken continuously during long periods without harm to the patient. Clinical evidence of its value in malnutrition is abundant. Even though we have experimental data to prove its worth in only one or two respects, is it not possible that other more remote effects may yet be demonstrated, Where chemistry fails biologic methods may later give the reason for previously obtained empiric results. The parallel with insulin suggests itself. Who is there who believes that the effect of insulin is confined exclusively to activation of carbohydrate metabolism?

The positive laboratory results with codliver oil justify its use as a preventive and cure of rickets in infancy, childhood and adolescence. The adult does not suffer from active rickets but the same dietetic or hygienic deficiencies which produce it in the child, may impair the health of the cells of the adult body and bring about disease.

The whole story of the vitamins is yet to be written and investigators are still waiting on the chemist to determine their exact nature. Meanwhile, it seems just to conclude that such foods as produce the best possible conditions of growth and such conditions of cell-nutrition as secure resistance to disease in the young of animals or of man are also necessary to the proper nutrition of the cells of the adult. Also diseases which may be brought about by food deficiencies of long standing are to be avoid by striving at all times to maintain a proper supply of the varieties of foods which because of containing essential activating substances, experience and laboratory data have taught us are necessary to health. Dietetics in disease consists usually in the restriction of certain food-stuffs and their substitution by other foods. In this restriction, we shall fail if we omit the consideration of these food-constituents of as yet, undetermined chemical nature.

Diabetes is no exception. If carbohydrates are to be restricted, fats must be substituted as a source of energy. If fats cannot be substituted in proper quantity either the individual must live on a lower plane of activity or be helped by insulin to reach the grade of activity commensurate with his usefulness. Fat restriction implies the risk of deficiency of one and probably two essential substances. These substances are found in cod-liver oil. Cod-liver oil would then seem to be a most desirable addition to the dietary of a diabetic who has lost much weight. This addition can be made by substituting cod-liver oil for other fats as soon as the fats in the diet have reached say 60 grams daily. Thirty cc. of the oil are of very much more value than the equivalent of other known forms of fat from a nutritional standpoint.

The writer has used cod-liver oil as a routine in the treatment of emaciated diabetic patients during the last six months and has found that the gain in weight and strength has been more rapid with it than without it. Eight cases were kept on a maintenance diet, some with and some without insulin, and weighed regularly. This method of observation is imperfect because of possible change in other conditions, but the course of the eight cases with whom it was carried out seemed to justify the procedure.

In a dietetic regimen, it seems highly desirable to attempt to embody all of the essential substances known as vitamins. The exact amount necessary cannot be laid down in the present state of our knowledge. Failing this exactness of dosage, one must safe-guard the patient by adding to the diet what would be slight excess of these substances. No harm could possibly come to the patient under such a plan comparable to the harm that might result during a prolonged dietetic restriction where these substances were lacking. Cod-liver oil seems to be the richest possible known source of fat-soluble substances and is utilized by the author to make sure they are taken by the patient.

In the series of eight cases, whose ages ranged from 26 to 62, observed by the author upon the cod-liver oil addition to the diet, the usual observations were made upon the urine and the sugar-content of the blood. The diet was checked with the usual degree of accuracy in a diabetic clinic for ambulatory patients. While there appeared a more rapid gain in weight and strength with cod-liver oil than without it, no improvement in the tolerance that could be attributed to this measure was observed.

One of these cases showed a particularly noteworthy gain in weight.

B. W. S. was a diabetic who had been admitted to Touro Infirmary, service of Dr. Lemann, July 13-23 in an extreme state of emaciation and weakness. He had lost 56 1-2 lbs. in weight and had been on a diet restriction constantly during the previous year. He complained of polyuria, ravenous appetite, cramps in the legs and deterioration of vision. There was some edema of the ankles, and numerous petechial spots in the skin. Over the mastoid regions there were pigmented spots. The gums showed pyorrhea, the tongue was brown but moist. The chest showed a wasted musculature. The lungs were apparently normal. The heart was normal in size. The heart sounds were muffled. Blood pressure was 100-70. There was evidence of arterial thickening. Abdomen was prominent and some fluctuation was noted in the flanks with patient lying down. The liver was about 3 c. m. below the costal margin. The weight on admission was 93 1-2 lbs.; height, 5 ft. 6 in. The urine on admision showed sugar, 25 grams in 24 hours. The blood-sugar was 266 m. g. per cc. on a diet of C 100—P42—F51. Acetone was present in the urine and in the breath. Under insulin, he became promptly sugar free and the fasting blood-sugar was reduced to 132 m. g. per cc. There was a constant gain in strength. The dose of insulin was increased to 30 units (H 10). The blood sugar being the guide; because of a high threshold, 200. A slight gain of weight 7 lbs. occurred during the 2 months in the hospital. At the time of discharge to the clinic Sept. 12-23, he weighed 95 1-2 lbs. and was sugar-free with a blood sugar of 133 on a diet of C. 46; P. 52; F. 48, no acetone in breath or urine. Insulin dose was kept at 30 units. He continued to gain weight slowly and Oct. 18-23, three months after treatment with Insulin was begun, he weighed 107 1-2 lbs. At this time 30 cc. of cod-liver oil was made part of his daily diet. being substituted or 30 g. m. of other fat. On Jan. 24-24 he weighed 122 1-2 lbs., and March 17-24, 131 lbs. The gain during first three months was 14 lbs., that during the second 3 months after cod-liver oil aded was 17 lbs. This period shows a greater increase in weight with the oil than without it. The patient noted a very marked improvement in his strength and took up a more laborious task. A cough which had troubled him for some years disappeared completely.

There is nothing very startling in these figures, but it must be remembered that the gain in weight during the two periods compared, was upon the same diet so far as caloric value and quantities of carbohydrate, protein

and fat are concerned, I feel sure such a gain might have occurred due to other causes, but the course of this case and the seven others lead me to believe that in cod-liver oil, we have a valuable addition to the dietary of all under-nourished or emaciated diabetic patients. In the growing child who is diabetic and who shows marked emaciation, the indication is absolute and it would seem so necessary as even to justify the use of insulin, if for no other reason, than to make possible the addition of cod-liver oil to the dietary.

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DISCUSSION

Dr. Allen Eustis:

I do not like to see this admirable paper go by without some discussion.

I have seen one or two of the cases in which Dr. Guthrie has used Cod Liver Oil, and they certainly do show some improvement. I have not had the opportunity to use it myself.

One point he memtioned, but failed to emphasize: fat soluble vitamine is a promoter of nutrition. Experimental animals on a diet deficient in this vitamine show marked malnutrition long before sclero-derma develops. There is no doubt cod liver oil does contain what some vegetable oils do not contain, viz fat soluble vitamin, and animals without fat soluble content do not nourish properly.

Another point outside of vitamine condition. I have had occasion, recently, to examine the stools of a great many diabetes, and often the stools are fatty, showing poor absorption. Cod liver oil renders itself most soluble. Two (2) teaspoonsful, if completely absorbed, have a greater calorie effect than one (1) oz. of butter, if passed through the bowel unabsorbed.

AN OVARIAN GRAFT: A CASE REPORT.

C. Jeff Miller, M. D., F. A. C. S.,
New Orleans.

The following case is of interest because of the behavior of an ovarian graft which was finally removed because of discomfort at the site of its implantation and an intractable metrorrhagia which began with the swelling of the graft and persisted until its removal.

Mrs. A. R. B., aged 28, first consulted me in 1915. Her family history was negative. She had had typhoid at 19, measles and mumps recently, and malaria several times. Her menstrual history began at 17 and after the first year was fairly regular. She had always suffered from dysmenorrhea, with intense backache and headache. She had had one full term, normal delivery, during which she was severely lacerated and following which she ran a slight temperature. Two years before her appendix had been removed, together with the entire left and a portion of the right ovary for multiple cysts. The lacerations were also repaired, though the results were not good. She had been nervous all her life.

When I first saw her she was markedly anemic and had lost considerable weight following a persistent diarrhea which had begun three months before. There had been a profound sexual excitement since mumps four months before, and her chronic nervousness had been much increased. She also complained of severe headaches, for which no cause could be found other than the pelvic condition. As the diarrhea was apparently not of amebic or tubercular origin it was decided that the pelvic condition justified operation. Therefore, in April, 1915, the uterus was curetted, an extensive tear of the cervix repaired, the right ovary removed, and the uterus suspended by the Montgomery technique. The remnant of the ovary was markedly cystic and buried in adhesions, and there were also marked adhesions between the sigmoid and the stump of the left ovary, which were freed. As small portions of the ovarian tissue appeared normal, and I was extremely desirous of conserving function because of the patient's age, before closure about half of the remaining portion of the remaining portion of the right ovary was tucked into a dry area behind the peritoneum and the left rectus muscle.

The patient's recovery was uneventful and she left the hospital in excellent condition. The sexual disturbance disappeared entirely and she gained in weight, although she continued to complain of headache and backache. Menstruation was re-established about three months after the operation. The periods were irregular, frequently coming a week or even two, ahead of time, but the dysmenorrhea disappeared entirely.

In July of 1917 she consulted me

again, stating that about three months before a small mass had appeared about an inch to the left of the scar, which was gradually enlarging and was very sensitive on pressure. Coincident with its appearance a metrorrhagia had developed which had been practically continuous since. Examination showed what was obviously a cystic condition of the ovarian graft, and its excision was advised.

The operation was entirely without incident. A small portion of the graft was still apparently normal, but the lower end was cystic and contained about three ounces of clear fluid. The pathological study showed an active corpus luteum. Within a few days after the operation the metarrhagia ceased entirely and there has been no return of the flow since.

The case is of interest as illustrating changes that may take place in grafted ovarian tissue, and also as illustrating the relation between the metrorrhagia and the gradual enlargement of the ovarian cyst.

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PREVALENCE OF TUBERCULOSIS.

Hardly anyone will be prepared to combat the assertion that tuberculosis is one of the most prevalent diseases common to civilized countries, and that it is one of the greatest scourges that ever persecuted mankind. In England and Wales it is responsible for 50,000 deaths, in Germany over 60,000, in France over 840,000, and in the United States 160,000 annually.

The fatality is greater during infancy than at any other period of life. Cobbett, the English authority, states that 16.7 per cent of the deaths occur during the first five years. From this time on up to the fifteenth year there is a decline, but the increase is rapid after the school period has been passed and a maximum is reached between the 35th and 55th year. Then there follows a second decline to a minimum in the eighth decenium.

In Louisiana during the years 1914 to 1922, inclusive, 20,214 persons are reported to have died of pulmonary tuberculosis. This, including deaths from other forms of tuberculosis, brings the total mortality up to 21,912 for this period.

In 1918 3,040 persons died from the pulmonary type as a result of the influenza epidemic. In 1919 the deaths had dropped to 2,326, rising to 2,360 in 1920. In 1921 there is a decided decline to 2,053 and in 1922 to 2,052.

There exists an apparent increase from 1914 to 1918. In 1912 there were 1,915 deaths, 2,330 in 1916, and 2,579 in 1917. The greatest increasce during these four years is between 1915 and 1916, and another rise in 1918 for the reason already given; this year marks the peak of the curve for the 9-year period.

The death rate from pulmonary tuberculosis shows a steady increase for the first five years. In 1914 it was 90.3 per 100,000, increasing to 110.3 in 1915, to 133.3 in 1916, 146.3 in 1917, and reaching a maximum in 1918 of 171.0.

From 1918 onward, with the exception of 1920, there is a steady decline in the rate. In 1919 it had dropped to 129.7, rising in 1920 to 130.6, and falling in 1921 to 113.2, and finally reaching the lowest recent figure of 111.7 per 100,000 in 1922.

It would be rash to draw definite conclusions from these statistical data, the accuracy of which is open to question, notably those figures prior to Louisiana's entrance into the Registration Area in 1918. There is, however, a suggestion of a gradual decline, which we understand is the case for the United States taken as a whole. On the other hand, too, it may mean that patients are receiving better care and are not dying so rapidly. It is possible, though, that the statistics may represent an actual diminution in the number of cases. We may be unduly pessimistic, but we hardly believe that the latter inference represents the true state of affairs.

ARE WE TRUE TO OUR TRUST?

The Principles of Medical Ethics of the American Medical Association, Chapter III, Section 1, relating to Phy-

sicians as Citizens, sets forth: "As good citizens and because their professional training specially qualifies them to render this service, should give advice concerning the public health of the community. They should bear their full part in enforcing its laws and sustaining the institutions that advance the interest of humanity. They should co-operate especially with the proper authorities in the administration of sanitary laws and regulations. They should be ready to counsel the public on subjects relating to sanitary police, public hygiene and legal medicine."

Recognizing the importance of reporting births and deaths and communicable diseases, the State Medical Society in 1923 adopted a resolution urging upon the members of the profession of the State of Louisiana that they take cognizance of this obligation. While it had its effect upon some, the records of the Bureau of Vital Statistics of the State Board of Health show that an astonishing number of our physicians, some of whom, however, may be retired, are more or less delinquent in the matter of reporting. One hundred and sixty-seven in Louisiana in 1923 did not report a birth or death, while 145 sent in less than four reports of births and deaths.

The records of the Bureau of Epidemiology show for the period of 1916 to 1923, inclusive, that there were reported throughout the State 7,520 cases of diphtheria, of which 946 died; 21,213 cases of gonorrhea were reported, with 87 deaths; malaria, 14,044 cases, with 3,854 deaths; smallpox, 8,028 cases, with 427 deaths; syphilis, 18,314 cases and 2,093 deaths; tuberculosis, 16,550 cases and 18,734 deaths; typhoid, 8,929 cases and 3,303 deaths.

You will note the disparity in number of cases as compared with deaths. It is conceded that for every death from tuberculosis there are ten cases.

In addition to the cases reported to the Epidemiological Department there were taken from the death certificates (included in figures in preceding paragraph) deaths from communicable diseases during 1922, 1,141, and 1923 2,749, or a total of 3,890 that had not been reported as required by Act 79 of 1921 and the Sanitary Code of 1923.

Vital statistics are the health bookkeeping of the State. No argument is required to demonstrate the ultimate importance of these figures. Individually and collectively, the physicians can render the State a great service by making full and prompt reports. If these were complete the prejudice that exists against the South would be removed, because we would have a correct statistical answer for the questions raised as to whether this is a land of mosquitoes, alligators and sickness. Our death rate for 1923 is 12 per thousand, many points lower than it was ten years ago, but by concerted action and the prevention of unnecessary sickness it can be made to compare favorably with the lowest rate in the United States.

PRESENT STATUS OF INSULIN.

It has now been about two years since the first announcement came from Toronto relative to the work of Banting and Best. Many were skeptical, for the isolation of the endocrine substance of the Islands of Langerhans, free from pancreatic enzymes and dangerous proteins, had long been sought in vain. Others were too optimistic, and, partly through the exaggerations in the lay press, the idea that a "cure-all" for diabetes had been discovered became more or less widespread. It was not long, however, before the medical profession learned of the value and the limitations of the new discovery, partly due to teachings of those to whom the Toronto group sent an early supply of the extract and partly through the instructions given by the pharmaceutical house in the United States which received rights from the discoverers. Later, this was supplemented by the munificence of Mr. John D. Rockefeller, Jr., whose gift enabled certain clinics to provide free instructions to physicians.

Much has been published of late as to the present status of insulin therapy, while the ultra-optimistic have been somewhat disappointed in the achievements of the product, there has been no swinging back of the pendulum at all for the conservative therapist; in fact, experience with the extract is so gratifying that we sometimes wonder why this principle was not isolated earlier and thereby more lives saved and more victims of diabetes mellitus made more

comfortable, with life more worth while for them. Although, as stated above, it is not a "cure-all," there is no doubt but that many patients have had their tolerance raised by maintaining a low blood-sugar level over a prolonged period through the use of insulin. Reports of apparent cures have been slow in coming in, but we hear of some, especially in the young. The Shreveport Charity Hospital records a case of a boy of 14, admitted with diabetic acidosis, on the verge of coma, with acute nephritis, who was not only tided over his acute trouble with the aid of insulin, but who, after four months of treatment, has resumed his normal life, on a fairly high caloric diet, and who remains apparently perfectly well, after leaving off the extract for eight months. Certainly, nothing better could be hoped for than the result in this boy, who, undoubtedly, would have died of diabetic coma in 1923 but for the work of Banting and Best!

Then, again, insulin has found a place in treating non-diabetic conditions, as cases reported in recent medical literature testify, such as in non-diabetic acidosis and in acute shock. In the condition of diabetes, complicating tuberculosis (or, vice-versa), in which a proper diet has heretofore been a most baffling proposition, insulin has proven a God-send, for, with its aid, we are enabled to feed the patient sufficiently to fight off the ravages of the "Great White Plague."

We predict that, within the next year or so, the chemical composition of the extract will have been worked out to such a point that its administration will be accompanied by less inconvenience than at present; at least, let us hope so, for the sake of our timid patients, who rebel at the idea of one, two or three "sticks" per day.

THE CHARITY HOSPITAL OF LOUISIANA IN NEW ORLEANS.

This institution has had an interesting history since 1908. In that year Col. W. G. Vincent, a devoted member of the Board of Administrators, offered a resolution inviting the members of the Visiting Staff to organize and to elect a committee for conference with the Board. At that time the executive management was in the hands of three house surgeons, who not only performed the duties of a superintendent, but also took care of the emergency surgery of the hospital, had surgical wards within its walls and practiced outside as well. In effect they were the superior officers of the Visiting Staff and their competitors within and without the institution. As might be expected, there was no co-operation between Visiting Staff and House Staff. It follows that when Col. Vincent's resolution was adopted the Visiting Staff cheerfully accepted the invitation, organized and selected a Conference Committee. There ensued a period of futile struggle to make useful and effective this committee. The Board had voted for the resolution; it went no further.

The election of Gov. Luther E. Hall in 1912 brought a change in the situation. He appointed a board not with a view to supporting certain individuals for the house surgeonships, but for the single purpose of giving the institution the best possible administration. This Board called in consultation Dr. S. S. Goldwater, of New York City, then Superintendent of Mt. Sinai Hospital and an ex-president of the American Hospital Association. After a thorough study of the situation he made recommendations of which the principal were the selection of a whole-time superintendent who should practice neither within nor without the hospital, and the development of a Conference Committee of the Visiting Staff, which should co-operate with the superintendent in advising the Board on all professional matters. Under the new system the House Staff, including now resident physicians as well as surgeons, were to do emergency work only, holding no hospital wards and doing no outside practice. These changes, promptly effected by the Board in 1913, made for a notable increase in the efficiency of the hospital.

The year 1916 came all too quickly, and with it a change in administration. The all-time superintendent who had labored to modernize the institution, was promptly dismissed to make room for his successor, who had contributed materially to the election of the incoming governor. Unfortunately, the new incumbent had been Assistant House Surgeon when that position carried with it

vice-regal authority; he had not been converted to the new system. Within a short time after his appointment the Conference Committee had lost much of its authority and influence in representing the Visiting Staff. The situation drifted back noticeably but not altogether to the status before 1913. After some three or four years the reactionary executive, realizing the need of co-operation on the part of the Visiting Staff, sought this co-operation and inaugurated a new era of progress along this line. However, before he had had time to accomplish much his health gave way to an extent that compelled his retirement.

His successor, now in office, made the policy of co-operation his own from the beginning, and carried it out to a degree not previously known in Charity Hospital. Besides vigorously pushing the physical improvement of the hospital so as to relieve overcrowding and eliminate unnecessary steps in the handling of admissions as well as to provide up-to-date equipment (including radium) as rapidly as possible, he has worked hand in hand with the Board in giving the Visiting Staff its proper place in the institution. All matters of a professional charcter are acted on only after reference to the Staff. For example, the Visiting Staff recommends promotions of its members from subordinate to higher ranks; this provides a systematic grading of the responsibility placed on them with increasing experience and skill.

There is an era of general good feeling and of effective team work. Under the circumstances it is natural that the visiting physicians and surgeons should endeavor to perpetuate the status quo and to guard against its being disturbed by political events. To that end legislation is being considered to provide overlapping terms in the board. With this provision an incoming State administration can introduce changes in the Board only gradually; a complete change at one stroke will then no longer be possible. It is felt that in this manner continuity of policy can be secured. Further, the taking up of medical executive work will be made more attractive by the fact that a sudden loss of position, as in the upheaval of 1916, will not have to be feared. It is not reasonable to expect men of ability to seek or accept employment that may be terminated after years of efficient service because the appointive power wishes to reward some faithful friend for campaign services. With this change effected the Charity Hospital in New Orleans will need but one thing to help it climb up to its rightful place in American medicine, and that is adequate appropriations. It is run on about half the per diem per capita of any similar institution in our country.

Let us give this time-honored refuge of the sick and injured, with its honorable record of service, the necessary tools to work with, free from handicap!

CORRESPONDENCE.

To the Editor:

My attention was especially attracted to the interesting historical sketch of the JOURNAL contained in the eightieth anniversary number. Aside from its general interest to the medical profession of the state, it was eminently appropriate to the occasion and is an addition to our archives. With this last idea in view, I desire to make two notations which I believe are deserving of special mention in connection therewith.

I wish to refer first to the period from 1896, when the JOURNAL was facing financial disaster, to the time of its acquisition by the Louisiana State Medical Society in 1922. THE JOURNAL was then under the able and efficient editorship of Doctors Chassaignac and Dyer. There were several notable achievements for the JOURNAL in these 26 years. From June, 1896, to June, 1922, the JOURNAL never failed to appear on time. In July, 1897, an edition de luxe was published, commemorating its 50th anniversary. The JOURNAL appeared uninterruptedly during the World War. In 1919 *The American Journal of Tropical Diseases and Preventive Medicine* was incorporated with it. Finally, it is a noteworthy fact, that the JOURNAL continued under the same management for the unusually long period of 26 years and proved in its hands a financial success.

Secondly, I wish to refer to the "purchase" of the Journal by the Louisiana State Medical Society in 1922. A recital of the facts in the case will show that the term "acquisition" rather than "purchase" applies to the transaction. At

the first meeting of the Executive Committee of the society in May, 1922, Dr. A. E. Fossier, Chairman of the A. M. A. Arrangement Committee, appeared and offered the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, which had been purchased by his committee, provided it would assume the remaining indebtedness. He stated that the chairmen of all the sub-committees had endorsed his action, that a cash payment of $3,000.00 had been made, and $2,000.00 was still due. This offer was accepted, and thus was the JOURNAL acquired by the state society. It is gratifying to note that all obligations have been met up to date without cost to the society.

The sketch would be incomplete without the mention of some of the distinguished men who edited the JOURNAL from 1884 to 1890, for the names of Drs. Bruns, Matas and Parham are linked with the long and honorable career of the JOURNAL.

I feel sure that you believe as I do that the above facts will help to perfect the records, and I therefore request you to publish this communication in the next number of the JOURNAL.

Cordially yours,

PAUL J. GELPI.

May 12, 1924.

Address of Mr. J. L. Ballard.

Mr. Chairman, Ladies and Gentlemen:

When the Almighty created the heavens and the earth; when from out the great deep arose the untrodden land; when He had jeweled the earth with His beautiful gardens and hung His lamps high up in the heavens, He fashioned a being in imitation of His own faultless form, graced him with something of His own divine attributes, and gave this kingly creation to the world. He prescribed the zone in which he must move in fulfillment of his destiny; He appointed the limits he should not pass; but He gave him ambition and a desire to learn and know, and the journey from childhood's cradle to the last long sleep is a ceasingless search for light.

In the fabled history of Greece we are told that a party of Ionians once bargained with some Milesian fisherman for the next draft of fishes they should catch. When the net was drawn up, it was found to contain a golden tripod which it was believed that Helen had thrown into the sea while returning from Troy. Very naturally a dispute arose as to whether the tripod belonged to the Ionians or to the fisherman. Being unable to settle this controversy themselves, they referred it to the oracle at Delphi. The oracle said, "Give it to the wisest." The Milesians, thinking that Thales, their own philosopher, was the wisest man on earth, sent it to him. But Thales, being too modest to deem himself perfect, forwarded it to Bias, another of the Grecian sages, who, in turn, and for similar reasons, sent it to Pittacus; and so it went around until it came to Solon; and his decision was, that "God, alone, is wise;" and he sent it to Delphi to be consecrated to Deity at that place.

But while we are not possessed with absolute wisdom, there are some things we have learned and know. We have discovered that in all this wide world no one lives to himself alone. By refusing to fraternize with his fellows, an individual may, in some degree, lessen the enjoyment of all; but the friendship he withholds will not enrich him, but only brings him the nearer to social bankruptcy. It is the duty of every one to relinquish, if necessary, something of his own convenience in order to make this good old world in which we live brighter and happier.

We have learned that it is even sweet to suffer for humanity; and that much of our national grandeur and many of our most valued privileges have come to us through the sacrifice of others. Curtis Guild tells us that nations, like individuals, become great, not from difficulties avoided, but from difficulties overcome; and the spell which avoids them is neither riches nor poverty, but sacrifice. There is not a great cathedral, there is not a mighty viaduct, there is not a line of rails stretching across field, veldt or prairie, that has not Moloch-like, demanded its sacrifice of human life. This much is demanded of the spread of civilization; that the many may rejoice, the few must suffer. The Egyptian died, but he left the Pyramids behind him; the Phoenician died, but he left the world the alphabet and navigation. The Greek died, but poetry and philosophy bloomed in the places where he had striven. The Roman died, but the barbarian, who slew him never could shake that mighty fabric of law which was to become the basis of all social order. The Swede and the German died, but from out the murky smoke of thirty years of battle was enkindled the pure white fire of religious liberty. The Frenchman died, but underneath his heroic form lay dead the feudal system never to rise again. The Englishman died, but the wastes of Australia and Manitoba furnish food for the hungry for Europe, the monsters of the Ganges no longer feed on innocent children, the girl-wife no longer perishes in torment on the funeral pyre, and the haunts of the thug and the tiger have become the highways of commerce and the field of the husbandman's increase.

In our own history, we read of the minute-man of the Revolution. And who was he? George William Curtis tells us he was the husband and father, who, born to love liberty and to know

that lawful liberty was their only guaranty to peace and progress, left the plow in the furrow and the hammer on the bench, and, kissing the wife and little ones, marched to die or be free. He was the old, the middle-aged and the young. He was the son and lover, the plain, shy youth of the village choir whose heart beat to arms for the good of his country, and who felt, though perhaps he could not say, with the old English cavalier:

"I could not love thee, dear, so much
Loved I not honor more."

He was Captain Miles, of Concord, who said he went to battle as he went to church. He was Captain Davis, of Acton, who reproved his men for jesting on the march. He was Deacon Josiah Hayes, of Sudbury, eighty years of age, who marched with his company to the Old South Bridge, joined in the hot pursuit to Lexington, and who there fell as gloriously as did Warren at Bunker Hill. He was young James Hayward ,of Acton, twenty-two years of age, foremost in that deadly race from Concord to Charleston, who raised his piece at the same moment with a British soldier, exclaiming, "You are a dead man!" The Britain fell, shot through the heart. James Hayward fell mortally wounded. "Father," he said, "I started with forty balls; I have but three left. Tell mother not to grieve too much; and tell her whom I love more than mother, I am not sorry I turned out."

Sacrifice all along the line of history! The tragedies of today, tomorrow, become forces, lifting nations to higher planes of liberty and propelling them to further achievement as great events are overtaken and woven in the loom of time.

Mr. Chairman—Two score and five years ago our fathers brought forth in this city a society, born in love, established on the altar of sacrifice, nurtured with the milk of human kindness, bathed in the blood of heroes, dedicated and devoted to humanity, and, annually since you have assembled in convention to revere the memory, pay tribute of praise to the worth of those comrades who had fallen in rank since your last assemblage; mark the progress made in the various branches of your profession and lay plans for future achievements. All for the uplift of humanity, the amelioration of suffering, the eradication of disease, the preservation of human life and the glory of God. And tonight ancient Opelousas rejoins to acknowledge the return of the scions of her distinguished sons, and modern Opelousas is happy to welcome and entertain them.

Opelousas, the city of your birth as an organization, has to her credit a long list of wonderful achievements during her more than two hundred years of existence, and these fraught not without disappointments, heart aches and disparagements. We have had epidemic upon epidemic, we have had epidemics of yellow fever, those of typhoid, smallpox, malaria and even the "*flu*," but, gentlemen, it has been a long, long time since we have suffered from such an epidemic of *doctors* as we have had during the past few days.

Your short sojourn in our midst has been delightful to us, and we trust has been pleasant for you. Aside from this it has been of untold educational value to us—you have been an inspiration. We are impressed seriously and solemnly with that lofty place you hold in our society—with that strategic niche which is yours in our civilization, and are called upon to acknowledge that debt of gratitude we can never repay. Indeed, there are few holier relationships than that existing between my doctor and me. Who brought me into this world. My doctor. Whom did mother call at the dead of night when I had the croup? My doctor. Who tenderly removed the thorn from my bare foot and administered the paregoric when I had eaten green apples? My doctor. And, in later life, who sat by my bed and felt my quickened pulse and soothed my fevered brow, giving unconsciously to me that which I could neither perceive nor appreciate—his very life—for to me and such as me is imputed the burden which wears the doctor's life and increases that deadweight upon his heart which eventually claims him. Then when it is over, when life has ebbed out its little way, who is he who notes the soul's departure and is the first to feel the cold breath of death as he steals over my prostrate form, and who is he

that pronounces me dead? My doctor. Is he not very part of me, and do I appreciate him? So often it is the case that when we've recovered from the bed of affliction and stand again basking in the sunlight of health and happiness, despite our promises and earnst protestations to the contrary, our God is *neglected* and our doctor *forgot*. How often is the doctor as much a casualty of a raging disease as the patient who succumbs—for into every case he injects something of himself and partakes of the nature of each case until he is no longer able to withstand the advances of disease and he, too, is taken from us. The press records—a doctor died—when in reality a soul as great as God's universe and a heart bursting for humanity has shaken off this mortal coil and joined the celestial choir. And as we drop the sympathetic tear over his last resting place we recall Graves' immortal definition of life.

I have seen some mighty engine rushing madly through the darkness, heedless of opposition and fearless of danger. I thought that was grand. I have seen the lightning flash across the sky, making the midnight as bright as the noonday sun. I thought that was grand. I have seen the light break over the eastern hills in glory, driving the lazy darkness like mists before a sunbeam gale—I *know* that was grand, but the grandest thing I ever saw was the grand lignt ot a beautiful life wrapping itself in benedictions around the destinies of men and finding a home in the blessed bosom of the everlasting God.

That, gentlemen, is my doctor!

Oh! doctors, one and all we greet you,
And we hope at last to meet you,
On the Golden Shore.

Report of the House of Delegates to the General Assembly.

In accordance with the constitution and by-laws, the House of Delegates wishes to report the following actions representing the deliberations and business transacted by your House of Delegates at the present meeting.

The various meetings of the Executive Committee, of the Council, reports of Councilors, and of Standing and Special Committees, were read to the House of Delegates and properly disposed of. The President's Report was replete with recommendations, and upon report of the special committee, the following items of interest were adopted.

First, the election of a president, and president-elect, the present-elect taking office one year after his election. This to go into effect in 1925.

The Secretary-Treasurer's report contained one important recommendation, that of having the Louisiana State Medical Society indorse the principle of assisting to establish some form of periodic health examinations throughout the state. The report of the Journal Committee covering the management and editing of the Journal for the past nine months for the present Journal Committee was read and after some slight modification was accepted. The new Journal Committee presently constituted, has the following personnel: Dr. H. B. Gessner, three years; Dr. A. A. Herold and Dr. A. O. Hoefeld, two years; Dr. O. Dowling and Dr. H. W. E. Walther, one year. Their report showed that the affairs of the Journal were in a very satisfactory condition, and at present free of obligation on the part of the Louisiana State Medical Society. The House of Delegates adopted the principle contained in the report of the Committee on Hygienic Marriage Law, submitted by Dr. R. McG. Carruth, chairman. The resolution requested that the bill be presented to our legal advisor for its determination as to its constitutionality and then submitted to the Committee on Public Policy and Legislation.

Upon the recommendation of the Women's Auxiliary, the committee was discontinued.

The Committee on Walter Reid Memorial made a very interesting report, and by motion approved the appropriation of the sum of $400 by the local Arrangement Committee of the New Orleans Convention, and amended the by-laws whereby the surplus money remaining in the Annual Arrangement Fund each year should be turnd over to the Walter Reid Committee, up to such time that the funds will reach $2,000, after which it shall be returned to the General Fund of the State Secretary, in accordance with the resolution amending the by-laws offered by Dr. Marvin Cappell.

Approval of the plan of the Committee on Publication, whereby one-half of the expenses of making and printing of cuts presented by the essayists is equally borne by the Louisiana State Medical Society and the essayist up to the number of ten, expenses over ten cuts are borne entirely by the essayists. The Committee on Health and Public Instruction submitted a very interesting report in regard to legislation dealing with the faulty labeling and sale of lye. It was recommended that the Committee on Public Policy and Legislation introduce a proper bill containing the most modern provision for the control of this commodity.

A resolution was offered by the St. Landry Parish Medical Society giving notice of an amendment to the charter, making the provision for having the Secretary of the State Body make its Executive Body. This will be introduced formally in 1925, according to the provisions made for such amendments.

The following officers, after being duly nominated, were elected as officers of the Louisiana State Medical Society:

President—C. V. Unsworth, New Orleans.
1st Vice-President—E. M. Ellis, Crowley.
2nd Vice-President—Carson R. Reed, Natchitoches.
3rd Vice-President—Roy B. Harrison, New Orleans.
Councillors:
1st District—S. M. Blackshear, New Orleans.
2nd District—H. W. Kostmayer, New Orleans.
4th District—A. A. Herold, Shreveport.
5th District—F. C. Bennett, Monroe.
Two members State Board of Medical Examiners: for vacancy in re—Dr. J. E. Knighton, expiring on date of
J. E. Knighton, Shreveport; S. C. Barrow, Shreveport.
Committee on Scientific Work—H. P. Jones, Elizabeth Bass, secretary-treasurer.
Committee on Public Policy and Legislation—D. J. McAnn, W. B. Phillips, R. B. Harrison, president and secretary.
Committee on Publication—P. S. McIlhenny, J. J. Ayo, secretary-treasurer.
Committee on Medical Education—B. W. Smith.
Committee on Medical Defense—R. O. Simmons.
Committee on Hospitals—G. M. Snellings, P. Graffagnino, O. P. Daly, S. D. Yongue, Charles Chassaignac.
Committee on Health and Public Instruction: W. H. Seemann, F. R. Gomila, J. W. Featherston, G. M. G. Stafford, W. F. Carriens.
Journal Committee, for term of three years—H. B. Gessner.
Delegate to American Medical Association—S. M. Blackshear, two years; Alternate, L. J. Williams, two years.
Next Place of Meeting—New Orleans.

Dr. Leon J. Menville was elected chairman of the House of Delegates.

The Resolution Committee offered the following resolutions, which were unanimously passed:

"Whereas, Those in attendance upon the meeting of our State Society have profited to the utmost by the courtesies and consideration shown them, we submit the following:

Be it resolved, That our thanks be extended to the profession of Opelousas and of St. Landry Parish, to the Committees on Arrangement and Entertainment, and especially to the genial local chairman, Dr. Fred J. Mayer, for his energetic and painstaking efforts. Also to the Elks, the Knights of Columbus, and the Masons, for the privileges and courtesies afforded us.

Be it further resolved, That we extend our thanks to the management of the various hotels, the citizens who have thrown open their homes to us and the public of Opelousas in general, for the most unique and general hospitality accorded us.

Be it further resolved, That we are deeply appreciative of the delightful and sumptuous luncheons served by the Masons and their ladies, by the Knights of Columbus and their ladies, our brethren of St. Landry Parish Medical Society and their ladies, and barbecue at Washington, cooked and served in a style that appealed to the most sensitive gastronomic senses.

Be it further resolved, That our thanks be extended to the Press for the kindness and consideration shown us at all times; also to those in charge of the ladies' entertainments for the unusual courtesies shown our ladies.

In general, the proverbial hospitality of Opelousas and St. Landry has been outdone in this instance and we shall ever cherish the memory of this meeting.

We could not close this report without expressing our debt of gratitude to our earnest secretary-treasurer, Dr. P. T. Talbot and his assistants, for their untiring efforts to make our meeting successful, and to them we also extend sincere thanks.

Whereas, one of our members, who is

unavoidably absent from this meeting, is now voluntarily retiring from "official harness," after rendering most valuable services to this society for many years; and

Whereas, Dr. George S. Bel has shown, by his example, after retiring from the presidency, that interest in this great organization should not lag with the surrender of the highest office, he having, since then, served as Councilor for eight years;

Therefore, be it resolved, That we are deeply appreciative of the eminent services rendered to organized medicine in Louisiana, by Dr. Bel, who, as a Councilor, conciliator, or mediator, seems to be endowed with unusual powers, and for these reasons we hereby extend our deep and lasting thanks to Dr. Bel.

Report of Our Delegate to Mississippi State Meeting.

To the Officers and Members of the Louisiana State Medical Society:

Gentlemen—

In rendering this, my report as the Fraternal Delegate from the Louisiana State Medical Society to the Mississippi State Medical Association, which met in Jackson, Mississippi, May 13th, 14th and 15th, I wish first to thank you for having had the honor and privilege of serving the Society in this capacity.

My credentials were presented at the first meeting. The President, Dr. Dearman, in introducing me, spoke briefly of his recent visit as the Fraternal Delegate from Mississippi to our Annual Meeting in Opelousas, mentioning the many kindnesses and courtesies that were extended him while a guest in our midst. It is needless to say that I was warmly received and made to feel the genuineness of the welcome from the time of my arrival to that of my departure.

The House of Delegates met each morning from 8:00 to 9:30, and after a recess of a few minutes, was followed by the Scientific Sessions. The meetings were well attended, there being over 450 members and guests registered. The scientific papers were splendid, covering a large range of subjects; the discussions were prompt and liberal. Clinics were held at the various hospitals from 8:00 to 9:00 each morning. Practically all of the meetings were held in the beautiful new Edwards House, where most of the members were registered. This facilitated and encouraged a larger attendance at the meetings, and proved both pleasant and a saving of time for the members.

The general arrangements were under the auspices of the Central Medical Society, Dr. G. E. Adkins of Jackson, President. Besides the ideal arrangement of the business and scientific meeting there were many delightful entertainment features. The public meeting on Tuesday night, held in the magnificent new Municipal Auditorium, was a treat. The President's address, covering briefly many subjects interesting to all minds today, was listened to with closest attention. Governor Whitfield paid a tribute to the medical profession, the gist of which was that *"the wealth of the state was dependent upon the health of her citizens."*

A trip by special train to the great State Tuberculosis Sanitarium at Sanitarium, Mississippi, said to be the largest and most modern institution of its kind in the world, and which is attracting the attention of health workers from all parts of the country, proved of much interest and a revelation to most of the visitors. Dr. Boswell, whose inspiration and years of strenuous effort in arousing the people of Mississippi to the needs of such an institution, said that "the hospital was a great monument to the members of the Mississippi State Medical Association." The train trip and dinner proved an excellent opportunity for bringing the doctors together for closer and better acquaintance.

Another delightful affair, following the close of the Scientific Session Thursday morning, was the elaborate luncheon given by the physicians of Jackson.

I was impressed by a provision in their by-laws making any member who has reached the age of 60 years and who has served the society for ten consecutive years, a member for life without further payment of dues while retaining his power to vote. Also, all ex-Presidents and Honorary members without further payment of dues, but privileged to vote.

Relative to the JOURNAL, I am pleased to report that a committee of three, consisting of the Secretary, Dr. T. M. Dye,

of Clarksdale, Dr. E. F. Howard and Dr. S. W. Johnson, of Vicksburg, were appointed to confer with our JOURNAL Committee and with power to act.

In the exchange of Fraternal Delegates one can readily appreciate the great opoprtunity it affords for bringing the organizations closer together, stimulating all to a common interest in organized medicine. I am voicing the sentiment as expressed by the President and Secretary of the Mississippi State Medical Association, in stating that the experience this year has been of inestimable value, and that they hope to see it extended to other near-by states in the future.

Cordially yours,

ELIZABETH BASS, M. D.

NEWS AND COMMENT

Orleans Parish Medical Society.

During the past month the society held two scientific meetings. Five scientific papers were read and in addition Dr. Robert King, medical missionary, was the guest of the society.

There has been a noticeable falling off of applications for membership. Every effort should be made toward increasing our membership and all eligible physicians in this parish should be approached with this object in view.

Many members have neglected to return their discussions within the time required by our by-laws, and as a result many of our papers appear with an incompleted list of discussions. The attendance at our meetings during the past month have been greater than for several months past. This gratifying increase in attendance will greatly encourage the Scientific Essays Committee.

The minutes for the year 1923 will soon be bound and will be available for reference in the library.

Beginning with Volume 77 of the New Orleans Medical and Surgical Journal, the Orleans Parish Medical Society will sign a contract for a period of one year.

The society was well represented at the State Medical Convention in Opelousas. A score or more members of this society read papers and many more took part in the discussions which followed.

Meetings scheduled for the month of June are as follows:

June 9th, Clinical meeting, Charity Hospital.

June 23rd, Scientific meeting, Hutchinson Memorial.

Report of Librarian for Month of April.

The Assistant Librarian has completed the cataloging of 280 books during the month. Of these 30 were received by gift, 15 from the New Orleans Medical and Surgical Journal, and 1 replacing a lost copy.

The night hours of opening in the library were discontinued on May 1st by order of the Dean of the Medical School, as the use seemed not to justify the expenditure.

Report of Treasurer for Month of April.

Total receipts	$ 524.10
Total expenditures	502.04
Resources.	
Domicile fund, Liberty bonds, par value	$30,000.00
Library endowment fund, bonds par value	3,500.00
Medical relief fund, savings account	96.23
	$33,596.23

Monthly Bulletin of the Shreveport Medical Society, May, 1924.

The May meeting of the Shreveport Medical Society was held May 6th at Charity Hospital at 8 p. m.

Scientific Program by Schumpart Sanitarium Staff.

Subject: Symposium on Cancer.

History and Theories of Etiology—Dr. J. J. Frater.

Diagnosis and Treatment:

Surface Cancer—Dr. C. B. Erickson.

Digestive Tract—Dr. J. S. Knighton.

Breast and Pelvic Organs—Drs. J. C. Willis and B. C. Garrett.

Bones—Dr. Guy A. Caldwell.

Radiological Diagnosis and Treatment—Dr. S. C. Barrow.

June Scientific Program by Drs. Pirkle, Williams, Harris and Green.

Subject: The Female Pelvis.

Surgery of the Tubes and Ovaries—Dr. L. H. Pirkle.

Caesarian Section—Dr. T. E. Williams.

Female Pelvis from a Urological Standpoint—Dr. E. W. Harris.

Extra-Pelvis Symptoms Due to Pelvis Pathology—Dr. H. L. Green.

Toxemias of Pregnancy—Dr. W. B. Heidorn.

Ectopic Gestation—Dr. S. W. Boyce.

Scientific Program.

Highland Sanitarium Staff had charge of the program, the subject being Some Chronic Abdominal Conditions.

Dr. Hendrick made a plea for a complete history and physical examination with the utilization of all diagnostic agencies to arrive at a correct diagnosis before subjecting the patient to an operation.

Dr. John's paper was on The Interpretation of Abdominal Pain.

Dr. Prothro, Some Symptoms of Chronic Gall Bladder Disease.

Dr. Lloyd, Chronic Intestinal Toxemia.

Dr. Douglas, Indigestion.

Dr. Rutledge, The Barium Meal and Opiate Enema in Chronic Abdominal Conditions Illustrated with X-ray pictures.

Discussion by Drs. Thomas, W. S. Kerlin, Crain, Rougon, I. Henry Smith, Cassity, Young, Barrow.

Closing by Drs. Hendrick, Lloyd, Douglas, Johns and Prothro.

The papers and discussions were instructive and interesting, continuing the high type of scientific program which has characterized the meetings this year.

On motion the Society adjourned.

ROBERT T. LUCAS, Secretary.

An interesting monograph by Dr. Lewis Heermann, Surgeon in the United States Navy, and a prominent medical figure in the City of New Orleans in the 1st century, has been received from the Editor, United States Navy Medical Bulletin, and is on file in the Library of the Orleans Parish Medical Society.

At the recent meeting of the Louisiana State Medical Society in Opelousas the Louisiana Railway Surgeons' Association was reorganized with the following officers:

President—Dr. Hermann B. Gessner, New Orleans.

Vice-President—Dr. O. P. Daly, Lafayette.

Secretary—Dr. W. Bradburn, New Orleans.

The next meeting will take place in Alexandria in September.

First Lepers for New Additional Buildings at Carville, La.

"The first of the additional buildings provided by Congressional Act of February 20, 1923, to enlarge the National Leper Home at Carville, La., have been completed and twelve lepers who had been temporarily detained elsewhere were moved to Carville, April 4," Surgeon General Cummings, of the U. S. Public Health Service, stated recently.

Western Physiotherapy Association.

The sixth annual meeting of the Western Physiotherapy Association was held at the Little Theatre, Kansas City, Mo., April 17 and 18, 1924, under the presidency of Dr. Harry H. Bowing, of Rochester, Minn. The following officers were elected for the ensuing year:

President—L. A. Marty, M.D., Kansas City, Mo.

First Vice-President—R. W. Fouts, M.D., Omaha, Neb.

Second Vice-President—W. P. Patterson, M.D., Springfield, Mo.

Secretary—Charles Wood Fassett, M.D., Kansas City, Mo.

Treasurer—W. P. Grimes, M.D., Kansas City, Mo.

Registrar—H. A. Spilman, M.D., Ottumwa, Iowa.

Board of Trustees—H. H. Bowing, M.D., Rochester, Minn.; L. B. Foster, M. D., Walters, Okla.

The association meeting was preceded by a six-day session of the Western School of Physiotherapy, a class of 100 attending. Next meeting will be held in Kansas City, April, 1925.

St. Tammany Parish Medical Society.

The St. Tammany Parish Medical Society met in regular monthly session on Friday, May 9th, at Slidell in the Community Room of the Association of Commerce, with the following members present: Dr. J. K. Griffith, president; Dr. F. R. Singleton, secretary-treasurer; Drs. R. B. Paine, P. L. Cusachs, J. F. Polk, F. F. Young, B. B. Warren, H. D. Bulloch, H. E. Gautreaux and A. G. Maylie, with Dr. Chaille Jamison of New Orleans as an honored guest.

Dr. Jamison came from New Orleans for the special purpose of attending this meeting, at which he delivered a discourse on "Cerebro-Spinal Syphilis." The lecture was as interesting as entertaining, and the round table talk that followed, led by Drs. Young and Gautreaux, brought forth many new and instructive points.

Light refreshments were served. The society held a short business session and adjourned to meet next month in Mandeville.

Most people have the mistaken idea that sunburn is caused by "the heat of

the sun." This is incorrect. Sunburn is caused by the ultra-violet rays, which constitute only 7 per cent of sunlight.

Nature herself provides a form of protection against the ultra-violet rays, for when a person is exposed continually to sunlight he will find that after several attacks of sunburn the skin becomes tanned or freckled. Tan and freckles are simply the natural pigment which nature provides as a yellow screen through which the ultra-violet rays can not pass and cause real injury by continued burning.

Foot and Mouth Disease.

In view of the epizootic of foot and mouth disease in cattle in certain parts of California at the present time and the interference with travel and with the shipment of certain foodstuffs (including milk) as the result of the presence of this disease, Acting Surgeon General White of the Public Health Service was asked to discuss foot and mouth disease from the viewpoint of its possible danger to human beings.

"The disease," Dr. White states, "is an acute, highly contagious malady affecting chiefly cloven-hoofed animals, such as cattle and sheep. Animals suffering from foot and mouth disease have fever, followed by an eruption consisting of vesicles (small blister-like sores) occuring chiefly on the mucous membrane of the mouth and on the skin at the cleft of the hoof and less frequently on the udders and other portions of the skin. There is usually prolonged ill health and much wasting of the tissues.

"The germ which causes this disease has not been identified, but it is known that it occurs particularly in the exudate from the vesicles, in the saliva, and in the milk of infected animals, though it is not limited to these materials. It is readily destroyed by heat, such as the boiling or pasteurization of milk.

"Adult human beings are not very apt to contract the disease, but it is by no means rare among children.

"The question has been raised as to whether the disease in children known as "impetigo contagiosa" may not be identical with foot and mouth disease in animals, but no one has yet been able to answer this question either in the affirmative or in the negative. Foot and mouth disease is not very fatal in cattle, and apparently much less so in human beings, if at all. It does cause serious losses when cattle are infected, because of the interference with the sale of milk, the reduction of the quantity of beef produced, and also on account of the expense and inconvenience resulting from quarantines against infected districts."

Dr. Appleton H. Pierce, Senior Surgeon, U. S. Public Health Service Reserve, has been appointed as Medical Officer in charge of the recently completed U. S. Veterans' Hospital No. 95, Northampton, Mass., General Frank T. Hines, director of the U. S. eVterans' Bureau, has announced.

PERSONAL.

Dr. L. Rosa H. Gantt, of Spartanburg, S. C., a prominent Eye, Ear, Nose and Throat Specialist, was a guest of Dr. Elizabeth Bass during the past month. Dr. Gantt is Treasurer of the Medical Women's National Association.

Dr. Hermann B. Gessner has been elected to fill a three-year term on the JOURNAL Committee of the Louisiana State Medical Society.

At a recent meeting of the American Gastro-Enterology Society at Atlantic City Dr. D. N. Silverman was elected to membership.

REMOVALS.

Surgery, Gynecology and Obstetrics —The Surgical Publishing Company of Chicago, editorial and business offices now located at 30 North Michigan Avenue, Chicago, will remove on April 29, 1924, to 54 East Erie Street, Chicago.

DIED.

On May 19th, 1924, Dr. C. F. Sartor, of New Orleans, aged 50 years.

The Fourth District Medical Society held its regular semi-annual meeting at the Shreveport Charity Hospital on May 8, 1924, under the presidency of Dr. T. J. Fleming of Mansfield, Dr. J. E. Heard of Shreveport being secretary. The meeting was well attended and much interest shown in the following program:

Call to order by President T. J. Fleming.

Greeting, by District Councilor A. A. Herold.

1. The Early Diagnosis of Early Pulmonary Tuberculosis, C. R. Gowan. Discussion opened by J. E. Knighton and W. S. Kerlin.

2. Miliary Tuberculosis, W. B. Rawls. Discussion opened by A. A. Herold.

Dinner by Charity Hospital, Dr. W. P. Morrill, Superintendent.

3. Some Surgical Conditions of the Breast, B. C. Garrett.

4. The Gall Bladder, made opaque to X-Ray by use of calcium-tetrabromphthalein, with demonstration of plates, S. C. Barrow.

5. Report of an Interesting Case, W. S. Kerlin.

6. Local Anesthesia in Prostatic Surgery, J. R. Stamper. Discussion opened by I. B. Rougon.

Announcements by the Secretary.

Adjournment till Autumn, 1924.

Dr. Wilkins McDade, Minden, President of Webster Parish Medical Society, has recently recovered from a bad infection of the hand.

The new North Louisiana Sanitarium, Shreveport, will be opened for patients about July 1st, 1924.

At the Shreveport Charity Hospital definite diagnosis was recently made of a case of suspected leprosy and the patient was committed to the U. S. Hospital at Carville, La., being conveyed there by Dr. Dowling, State Health Officer. The patient has a combination of the anesthetic and tubercular types.

Dr. H. O. Barker, who was stationed at Shreveport for nearly four years as sub-district Medical Officer of U. S. Veterans' Bureau, has recently been transferred to Hospital No. 27, near Pineville, La. Dr. Barker did excellent work at the Shreveport office and made many friends there, who are glad to know that his transfer is in the nature of a promotion.

S. M. A. Committees Appointed.

Dr. Homer Dupuy, chairman of committee of arrangements for the Southern Medical Association meeting, which will be held in New Orleans, November 24-27, has appointed the following chairmen who will serve as a general committee: Dr. E. L. Leckert and Dr. Geo. Dempsey, buildings and halls; Dr. H. W. E. Walther, commercial exhibits; Dr. F. M. Johns, scientific exhibits; Dr. John Lanford, finance; Dr. J. C. Menendez, hotels; Dr. P. T. Talbot, registration; Dr. Paul J. Gelpi, entertainment; Dr. Leon Menville, badges; Dr. Jules Dupuy, lanterns; Dr. Daniel Silverman, membership; Dr. F. R. Gomilla, automobiles; Dr. A. I. Weil, golf; Dr. H. E. Bernadas, publicity; Dr. M. J. Lyons, alumni dinners; Dr. R. C. Lynch, clinics; Dr. Elizabeth Bass, women physicians; Dr. B. A. Ledbetter, public health; Dr. A. L. Whitmire, information; Dr. C. V. Unsworth, for Louisiana State Medical Society; Dr. Chaille Jamison, ex-officio chairman, and Dr. Lucien Ledoux, secretary.

It is expected that we will have an attendance of over 2,500. Money will be needed to worthily entertain our confreres from all parts of the South. Funds are being collected by the following members of the finance committee: Drs. R. Bernhard, A. Nelken, Lucian Landry, M. Boebinger, Chas. Samuel, A. L. Levin, L. R. DeBuys and E. L. King.

The other committees have begun functioning and are enthusiastic in their endeavor to insure the success of what must prove a notable event in the history of Louisiana medicine.

At a recent meeting of the Charity Hospital Staff, New Orleans, a committee was appointed to investigate the problem of depoliticalizing this institution. The members of the Staff appointed on this committee are: Dr. H. B. Gessner, chairman; Dr. I. I. Lemann, Dr. E. H. Walet, Dr. H. W. E. Walther, and Dr. E. L. King.

At the call of Dr. C. V. Unsworth, president Louisiana State Medical Society, 140 representative men and women met at a luncheon at the Hotel Roosevelt recently to hear Dr. Linsly R. Williams, of New York City, who is managing director of the National Tuberculosis Association. Dr. Williams made a plea for a larger program of

tuberculosis work in Louisiana, to be chiefly along educational lines. Among others to address the gathering were: Dr. Oscar Dowling, State Health Officer; Miss Kate M. Gordon, vice-president Orleans Parish Anti-Tuberculosis League; Dr. Ernest Lewis, president of the State League; Dr. Wallace J. Durel, of Covington; Dr. R. G. Patterson, of Ohio; Miss Sara Ellis, president of Tangipahoa Parish League, and Dr. J. A. Danna.

Report of the Louisiana State Tuberculosis Commission of the State of Louisiana, 1923-1924.

Governor John M. Parker,
Baton Rouge, La.
Dear Governor Parker:

The following is a report of the Louisiana State Tuberculosis Commission:

The Commission was created by a bill enacted in 1912. The purpose set forth is as follows:

"To provide for the suppression of tuberculosis within the State and means for the isolation, care, cure and treatment of persons suffering therefrom; to authorize the acquisition of two or more sites for the location of sanatoria for persons ill with tuberculosis; to provide funds, ways and means for the establishment and maintenance of such sanatoria and placing such sanatoria, subject to the general supervision of the State Board of Health, under the administration and charge of the State Tuberculosis Commission."

The membership designated is: The Governor, the Attorney General, the President and Secretary of the State Board of Health.

In 1918 the Act was amended, adding three members (physicians) to the Commission; these to be selected upon the recommendation of the Anti-Tuberculosis League, one of the three to be a New Orleans physician, and two from a list of six non-residents of New Orleans.

In 1922 the Act was again amended, increasing the membership of the Commission. Under this amendment seven are chosen as before; the additional two members it provides shall be women, one of whom shall be selected from the City of New Orleans.

1. The Commission purchased in 1915 six hundred and twenty-three (623) acres of land several miles from Alexandria, for the establishment of a district state sanatorium.

2. It entered into negotiations with the Orleans Parish Anti-Tuberculosis League (March, 1918), whereby the State would take over Camp Hygeia, near Slidell. The proposition was accepted by the Commission, but the transfer was never made by the League.

3. The offer of the Louisiana Anti-Tuberculosis League of Greenwell Springs (November 28, 1922) to the Commission was not accepted as objections were made to the inaccessibility of the location and doubt expressed as to whether it could be legally accepted by the State so long as it was encumbered.

4. January 23, 1923, the Commission agreed to accept the Greenwell Springs property when the transfer could be made with an unencumbered title.

5. On April 4, 1924, the Greenwell Springs property was again offered, free from encumbrance, and was accepted by the Commission. At the same meeting it was agreed to sell the Alexandria property at $12.00 per acre. The sale has been consummated.

From year to year numerous efforts were made to have meetings of the Commission. Most of these were unsuccessful. In order to bring about co-operative effort, and that the Commission may accomplish the purpose for which it was created, it has been suggested by the National Tuberculosis Association that there should be a complete reorganization. The functions of the Commission should be the same as those exercised by boards of trustees of tuberculosis sanatoria—it should purchase suitable sites, select plans, construct, equip and administer sanatoria.

It is doubtful if the Governor and the Attorney General should be members of the Commission, and it would seem more reasonable that the list of physicians sent in should be nominated by the State Medical Society; also that the Governor should not be limited to two women, one of these from New Orleans. From the experience of other States, it would seem wise that the President of the State Board of Health should be designated as Chairman of the Commission, and, as members, the Secretary of the State Board of Health and the Director of the Bureau of Tuberculosis Control of the

State Board of Health. Since the generally accepted plan is that there should be a sanatorium for each Congressional District of any State, there should be selected as additional members, one person from five Congressional Districts, these to be other than districts in which Shreveport and New Orleans are situated.

Nominations for membership on the Commission should not be limited by law to any group or groups.

The Bureau of Tuberculosis Control of the State Board of Health should work in harmony with the Tuberculosis Commission.

I take pleasure in submitting the financial statement as shown on the books:

Received form State Treasurer, December 20, 1913	$ 100.00	
Less expenses	100.00	
Received January 6, 1915	$ 9,900.00	
Less expenses (including purchase land)	$ 3,524.50	$6,375.50
February 20, 1918, received		10,000.00
Deposited Hibernia Bank, December 7, 1921		$16,375.50
Deposit, sale (April 4, 1924) land Alexandria, 10 per cent		747.60
Interest Hibernia Bank		1,176.69
		$18,229.79
Less expenses incurred		163.25
		$18,136.54
Balance due on Alexandria land, May 13, 1924		6,728.40
Amount due Commission to date		$24,864.94

Respectfully submitted,

OSCAR DOWLING,

President, Louisiana State Tuberculosis Commission.

New Orleans, La., May 15, 1924.

PUBLICATIONS RECEIVED.

W. B. Saunders Company, Philadelphia and London: *"The Circulatory Disturbances of the Extremities,"* by Leo Buerger, M. A., M. D. *"Pediatrics,"* by various authors, edited by Isaac A. Abt, M. D. *"Differential Diagnosis,"* Vol. II, by Richard C. Cabot, M. D.

F. A. Davis Company, Philadelphia: *"Cosmetic Surgery,"* by Charles Conrad Miller, M. D. *"Cancer of the Breast,"* by L. Duncan Bulkley, A. M., M. D. *"Maternity Nursing in a Nutshell"*, by Elizabeth H. Wickham, R. N. *"Diseases of Middle Life,"* Vols. I and II edited by Frank A. Craig, M. D. "The *Relative position of Rest of the Eyes and the Prolonged Occlusion Test,"* by F. W. Marlow, M. D., M. R. C. S. Eng., F. A. C. S. *"Modern Treatment and Medical Formulary,"* compiled by W. B. Campbell, M. D.

Funk & Wagnalls Company, New York and London. *"Food for Health's Sake,"* by Lucy H. Gillett, A. M. *"The Young Child's Health,"* by Henry L. K. Shaw, M. D. *"The Human Machine,"* by William H. Howell, Ph. D., M. D., L. L. D., Sc. D., *"Taking Care of Your Heart,"* by P. Stuart Hart, A. M., M. D., *"The Quest for Health,"* by James A. Tobey.

Lea & Febiger, Philadelphia and New York: *"Modern Urology,"* Vols. I and II, edited by Hugh Cabot, M. D., C. M. G., F. A. C. S.

Paul B. Hoeber, Inc., New York: *"What Every Mother Should Know,"* by Charles G. Kerley, M. D.

P. Blakiston's Son & Company, Philadelphia: *"Gynecology and Pelvic Surgery,"* by Roland E. Skeel, M. D., A. M., M. S.

D. Appleton & Co., New York and London: *"Clinical Laboratory Diagnosis,"* by Rober Sylvester Morris, A. B., M. D.

Physicians and Surgeons Book Company, New York: *"Genitourinary Diseases and Syphilis,"* by Henry H. Morton, M. D., F. A. C. S.

Washington Government Printing Office: *"Public Health Bulletin No. 139."* *"Hygienic Laborotory Bulletin No. 135."* *Public Health Reports,"* Vol. 39, Nos. 14, 15, 16, 17.

Miscellaneous: *"Social Control of the Feebleminded,"* by Stanley P. Davies, Ph. D. *"Les Regimes Fondamentaux,"* by Paisseau, P. Carnot, A. Lemierre, A. Baudouin Rathery, J.—Ch. Roux, Marcel Labbe.

REPRINTS

"Liver Abscess," by A. I. Ludlow, M. D., F. A. C. S. *"Successive Pregnancies in eash Member of a Didelphic Uterus with Cesarean Delivery in each Case on Account of Dystocia caused by Retroversion of the Non-Pregnant Uterus,"* by Gilbert Fitzpatrick, M. D., F. A. C. S.

BOOK REVIEWS.

Radium Report of The Memorial Hospital, New York. Second Series 1923. Paul B. Hoeber, Inc., New York, 1924.

A glance at the list of contributors is sufficient to recommend this report to all radium workers, as containing valuable information about radium application and therapy. Chapter 2, dealing with technical principles employed in radium therapy, is of great value. Radium emanation, its indications and method of application is explained in a very clear and concise manner. A report is given of the effect and results obtained with radium in all forms of malignant disease. Tables are given in chapter xv showing the results obtained in carcinoma of the bladder in both intravesical and suprapubic methods of radium application, and the following statement is made by Benjamin S. Barringer: "I have never seen any operative statistics that compare at all with those of the above tables"

LEON J. MENVILLE, M. D.

Endocrinology, Lectures On. by Walter Timme, M. D.. Paul B. Hoeber, Inc., New York, 1924.

The monograph is an elaborated article on "Clinical Endocrinology" which appeared in the Neurological Bulletin for January, 1921. It is justly published in response for reprints of his article on the subject.

Dr. Walter Timme has presented in an understandable English and has treated logically a difficult subject "Endocrinology" and should you read his monograph you will obtain most valuable information.

T. J. DIMITRY, M. D.

War against tropical disease, by Andrew Balfour, C. B., C. M. G., M. D., B. Sc. (Public Health), F. R. C. P. (Edin.). D. P. H. (Camb.), Director-in-Chief, Wellcome Bureau of Scientific Research. Bailliere, Tindall & Cox, London, 1924.

This book brings together seven interesting papers, all but one of which (The Palm from a Sanitary Standpoint) have been published previously. They are as follows: Some Aspects of Tropical Sanitation, Tropical Problems in the New World, Preventive Inoculation against Typhoid and Cholera, The Medical Entomology of Salonica, Sanitary and Insanitary Makeshifts in the Eastern War Areas, The Problem of Hygiene in Egypt, and the Palm from a Sanitary Standpoint.

The papers which had previously been published have been revised, altered in some places and brought up to date.

The titles indicate the nature of the subject dealt with. The subjects are treated in a most interesting way by a world-authority. Andrew Balfour has had the most extensive experience in dealing with conditions and diseases met with in tropical countries. The book is of special interest because the author speaks from actual experience in dealing practically with the problems that are met.

This work is well illustrated with a large number of original pictures, practically all of which are made from photographs. They are well selected and are interesting and instructive. Students of tropical medicine, and especially those contemplating taking up duties and responsibilities in tropical countries, will benefit greatly by reading this book.

C. C. BASS.

The Elements of Public Health, by George Sparr Luckett, A. B., M. D., and Harold Farnsworth Gray, B. S., M. S., Gr. P. H., P. Blakiston's Son and Company, Philadelphia, 1923.

Luckett & Gray have just published a book entitled "The Elements of Public Health Administration" which does much credit to the two authors. It is divided into three sections. The first is comprised of 21 chapters of Public Health Administrative Measures; the second on the Preventable Diseases under 42 headings and the third is an appendix divided into ten different categories.

We have read the sections of this book carefully and with great pleasure. It is clear and lucid, and while it does not contain much new information, still the manner in which the information is distributed makes ie easily accessible, and we believe that this book should prove of great benefit to the average Health Officer. The section devoted to communicable diseases considers a large number with a brief synopsis of the causes, diagnosis and manner of prevention together with the mode of transmission and other useful data.

The appendix is unique and contains desirable information on the manner of handling courses for public health nurses and midwives, describes also the plan for organization of relief service units, complete instructions for use together with facsimile of dairy score card, finally a description of the Schick Test as well as different disinfection and delousing methods.

We believe that this book fills the need that more extensive and complete reference books on Public Health, Hygiene and Preventive Medicine do not. In the first place the information is so arranged that it is easily accessible, there is neither too much nor too little and there is as a rule just what one needs and wants at a critical moment.

OSCAR DOWLING, M. D.